LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

TRAVER COMMUNITY PLAN UPDATE
BIOLOGICAL EVALUATION
TULARE COUNTY, CALIFORNIA

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EXECUTIVE SUMMARY

Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of the Traver Community Plan Proposed Planning Study Area (PPSA) in the unincorporated community of Traver in Tulare County, California and evaluated likely impacts to such resources resulting from development of the PPSA. The approximately 383-acre PPSA consists of three separate blocks of land both east and west of State Highway 99. In April and June 2014, LOA surveyed the PPSA for biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law.

Habitats/land uses identified within the PPSA included orchards, agricultural fields, industrial/residential lands, ruderal areas, and a segment of Banks Ditch and the Traver Canal. A mosaic of agricultural, industrial, and residential/commercial land uses surround the PPSA, within a region dominated by similar land uses.

Impacts associated with future development of PPSA would be less than significant, as defined by the California Environmental Quality Act (CEQA), for special status plant species, wildlife movement corridors, downstream water quality, and sensitive habitats. Loss of habitat for special status animal species would also be considered less than significant under CEQA.

Potentially significant impacts associated with future development of the PPSA include construction mortality of the valley elderberry longhorn beetle (VELB), Swainson's hawk, San Joaquin kit fox, burrowing owl, loggerhead shrike, pallid bat, and western mastiff bat; nesting raptors and migratory birds protected under the federal Migratory Bird Treaty Act and related state laws; and colonially roosting bats. Project avoidance of active nests, dens, and roost sites identified during preconstruction surveys, compensation for the removal of any blue elderberry shrubs, and implementation of minimization measures consistent with the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* will ensure that impacts to all special status animal species are reduced to a less than significant level.

Project impacts will also potentially be significant for waters of the U.S., which in the PPSA consists of approximately 3,400 linear feet of Banks Ditch and 2,235 linear feet of Traver Canal. Impacts to Banks Ditch and the Traver Canal can be mitigated through on-site or off site preservation or creation, through payment into an in-lieu fee program (if one is available), purchase of credits from an approved Mitigation Bank in the vicinity, or some combination of one or more of these options.

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1.0 INTRODUCTION

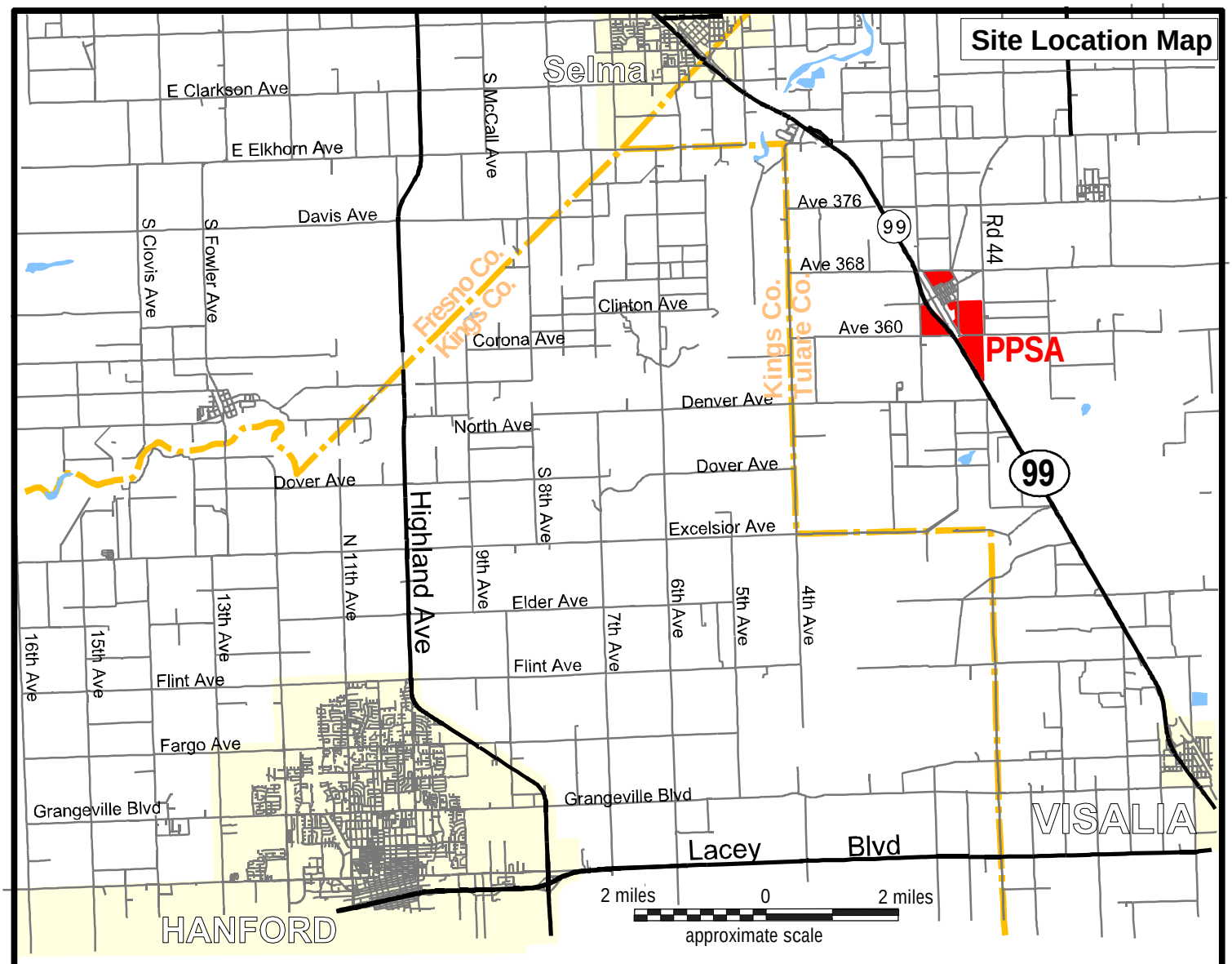
The technical report that follows describes the biotic resources of approximately 383 acres of lands (hereafter referred to as Proposed Planning Study Area or PPSA) proposed for addition to the Traver Community Plan area. The PPSA consists of three disjunct areas west, east, and north of the unincorporated community of Traver in Tulare County, California (Figure 1). The westernmost area is bounded by Road 36 on the west and State Highway 99 on the east, and comprises approximately 92 acres. The easternmost area is bounded by Highway 99 on the west and Road 44 on the east, and comprises approximately 238 acres. The northernmost area is bounded by Avenue 368 on the north, Canal Drive to the east, and Jacobs Drive to the southeast, and comprises approximately 53 acres. The site may be found on the *Traver* U.S. Geological Survey (USGS) 7.5-minute quadrangle in Sections 16 and 21 of Township 17 South, Range 23 East, Mt. Diablo Base and Meridian (Figure 2).

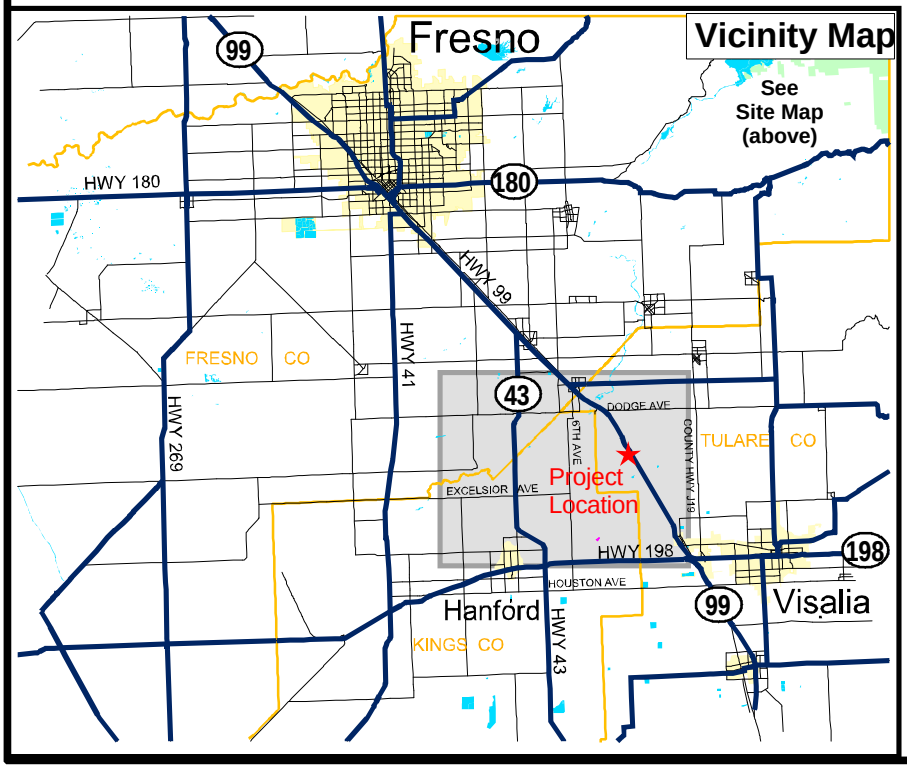
1.1 PROJECT DESCRIPTION

The County of Tulare proposes to update the Traver Community Plan with the addition of the 383-acre PPSA to the plan area, following which the PPSA may be developed under a number of individual projects.

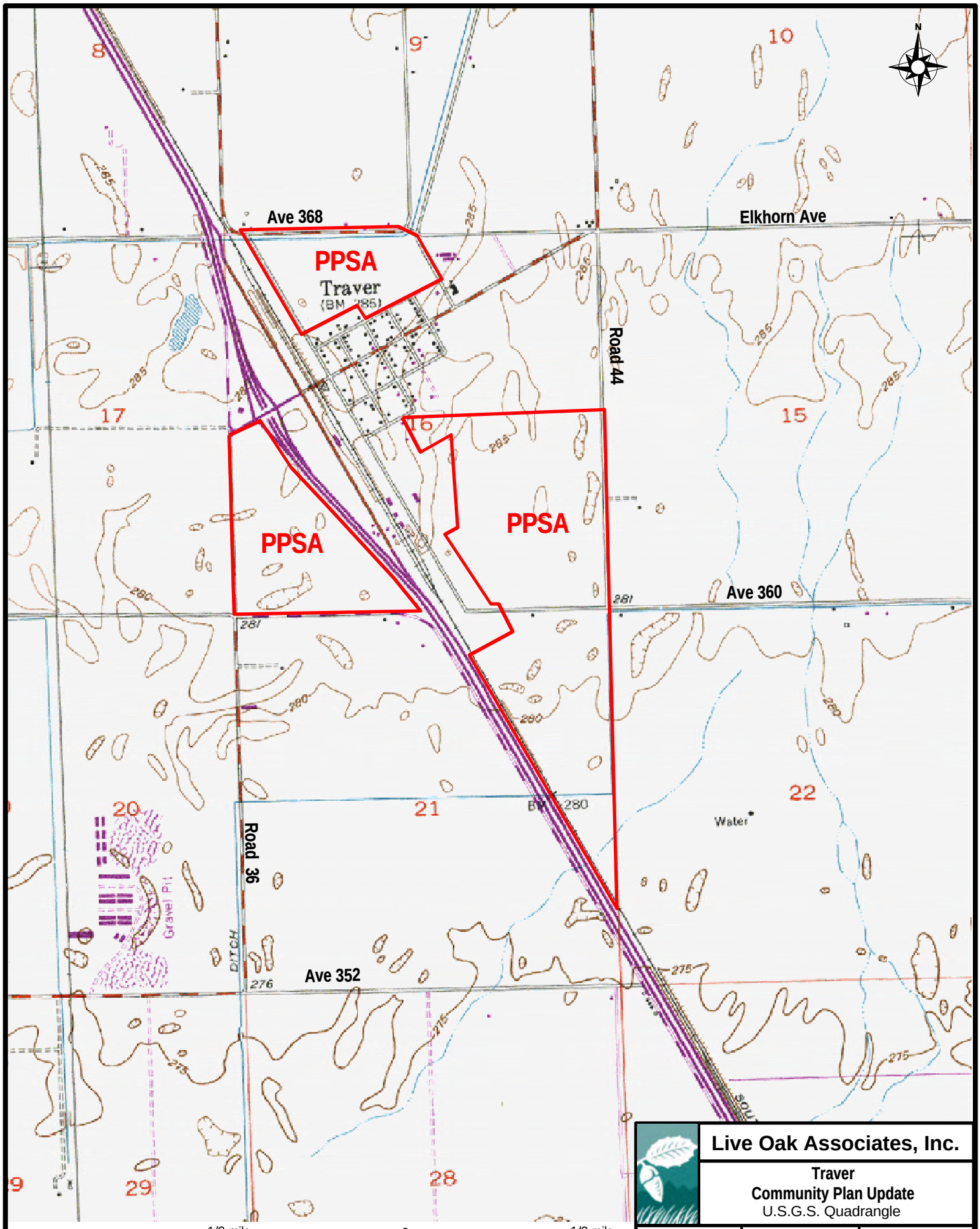
1.2 REPORT OBJECTIVES

The development of agriculture and other open space parcels may damage or modify biotic habitats used by sensitive plant and wildlife species. In such cases, site development may be regulated by state or federal agencies, subject to provisions of the California Environmental Quality Act (CEQA), and/or covered by policies and ordinances of Tulare County. This report addresses issues related to: 1) sensitive biotic resources occurring within the PPSA; 2) the federal, state, and local laws regulating such resources, and 3) mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies. As such, the objectives of this report are to:





Live Oak Associates, Inc.		
Traver **Community Plan Update** Vicinity Map		
Date **4/24/2014**	Project # **1840-01**	Figure # **1**



From USGS
Traver 7.5' Quadrangle 1969

1/2 mile 0 1/2 mile
approximate scale

Live Oak Associates, Inc.

Traver
Community Plan Update
U.S.G.S. Quadrangle

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- Summarize all site-specific information related to existing biological resources;
- Make reasonable inferences about the biological resources that could occur within the PPSA based on habitat suitability and the proximity of the PPSA to a species' known range;
- Identify and discuss project impacts to biological resources likely to occur within the PPSA within the context of CEQA or any state or federal laws; and
- Summarize all state and federal natural resource protection laws that may be relevant to future development of the PPSA;
- Identify avoidance and mitigation measures that would reduce impacts to a less-than-significant level (as identified by CEQA) and are generally consistent with recommendations of the resource agencies for affected biological resources.

1.3 STUDY METHODOLOGY

A reconnaissance-level field survey of the western and eastern sections of the PPSA was conducted on April 16, 2014 by LOA ecologists Rebekah Jensen and Wendy Fisher. The northern section of the PPSA was surveyed on June 26, 2014 by LOA ecologist Geoffrey Cline. The surveys consisted of driving and bicycling roads of the PPSA, conducting a meandering walk through accessible lands, and using binoculars to scan those lands for which access was not possible. During the surveys the principal land uses/habitats of the PPSA were identified and the constituent plants and animals of each land use/habitat were noted.

LOA conducted an analysis of potential project impacts based on the known and potential biotic resources of the PPSA. Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFW 2014), (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2014), and (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

Detailed surveys for sensitive biological resources were not conducted for this study. Field surveys conducted for this study were sufficient to assess the significance of possible biological impacts associated with full development of the PPSA and to assess the need for more detailed studies that could be warranted if sensitive biotic resources were identified in this initial survey.

2.0 EXISTING CONDITIONS

2.1 REGIONAL SETTING

The PPSA is located in the central San Joaquin Valley east, west, and north of the community of Traver. The valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the central San Joaquin Valley (and the PPSA) experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the PPSA is about 10 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain.

The principal drainage of the area and the project vicinity is the Kings River, which flows past the PPSA approximately three miles to the northwest. The Kings River historically contained large areas of riparian, wetland, and aquatic ecosystems that supported large populations of diverse native plants and animals. Presently, the Kings River supports only a fraction of the riparian habitat it once supported and the aquatic habitat has been greatly degraded from agricultural runoff and irregular flows. In essence the river has been reduced to a series of distributary channels supplying water to farmland in the region.

The PPSA is situated within a matrix of agricultural lands, industrial complexes, and residential/commercial development associated with the community of Traver. The westernmost block of the PPSA is bordered by industrial/ruderal land to the north, Highway 99 to the east, and orchard to the south and west. The easternmost block of the PPSA is bordered by orchard to the north and east, Highway 99 to the southwest, and orchard and industrial complexes to the west. The northernmost block of the PPSA is bordered by an orchard and vineyard to the north, agricultural land to the southwest, the community of Traver to the southeast, and Traver Elementary School to the northeast.

2.2 PROJECT SITE

The PPSA consists of orchard land, irrigated and dry-farmed agricultural fields, a railroad yard, an industrial complex, and two residential lots. The topography of the site is relatively level, with an average elevation of 285 feet National Geodetic Vertical Datum (NGVD).

Three soil mapping units within four soil series were identified within the PPSA: Calgro-Calgro saline sodic, 0-2 percent slopes, Crosscreek-Kai Association, 0-2 percent slopes, and Youd loam, 0-1 percent slopes (NRCS 2014). All three of these soil mapping units are considered hydric, defined as saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions they support hydrophytic vegetation. However, soils of the site exhibited no characteristics required by rare edaphic plant species.

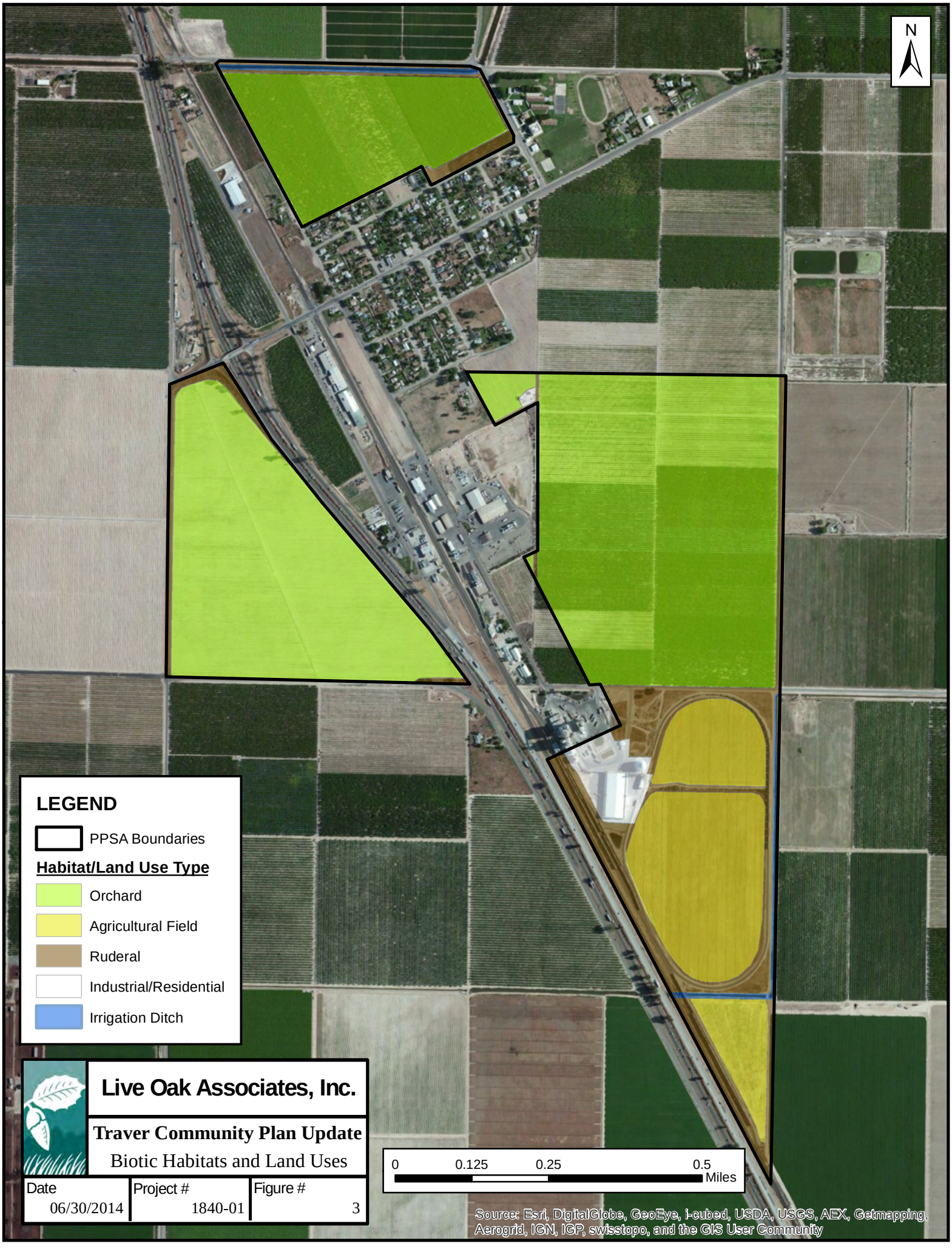
2.3 BIOTIC HABITATS/LAND USES

Five land use/habitat types were observed within the PPSA during the April and June 2014 biological field surveys: orchard, agricultural field, ruderal, industrial/residential, and irrigation ditch (Figure 3). A list of the vascular plant species observed within the PPSA and the terrestrial vertebrates using, or potentially using, the site are provided in Appendices A and B, respectively. Selected photographs of the PPSA are presented in Appendix C.

2.3.1 Orchard

Orchard comprised approximately 258 acres, or the considerable majority, of the PPSA. At the time of the April and June 2014 field surveys, orchards in the western portion of the PPSA consisted of almond (*Prunus dulcis*), while orchards in the eastern and northern portion of the PPSA consisted of nectarine (*Prunus persica* var. *nectarine*), peach (*Prunus persica*) and/or cherry (*Prunus avium*). Being highly maintained, these orchards were barren in the understory.

Due to intensive disturbance and the lack of aquatic habitat, orchards provide marginal habitat for amphibians; however, Pacific chorus frogs (*Pseudacris regilla*) and western toads (*Bufo boreas*) may disperse through orchard lands during the winter and spring. A limited number of



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Traver Community Plan Update

Biotic Habitats and Land Uses

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reptile species would be expected to forage in orchards of the PPSA due to the lack of sun required by these species for thermal regulation; however, the western fence lizard (*Sceloporus occidentalis*), Pacific gopher snake (*Pituophis catenifer catenifer*), common kingsnake (*Lampropeltis getulus*), and western rattlesnake (*Crotalus viridis*) may occasionally occur.

Orchards provide foraging and nesting habitat for a number of avian species. Birds that could potentially nest in mature orchards of the PPSA and were observed during the surveys include the American robin (*Turdus migratorius*) and mourning dove (*Zenaida macroura*), both year-round residents of the Central Valley, and the western kingbird (*Tyrannus verticalis*), a summer migrant. Winter migrants such as the white-crowned sparrow (*Zonotrichia leucorphrys*) and yellow-rumped warbler (*Setophaga coronata*) would also be expected to use orchards of the PPSA for foraging and cover.

A few small mammal species would be expected to occur within the orchards of the PPSA. These include deer mice (*Peromyscus maniculatus*), California voles (*Microtus californicus*), house mice (*Mus musculus*), Botta's pocket gophers (*Thomomys bottae*), and Audubon's cottontails (Sy*lvilagus audubonii*). Various species of bat may forage over orchard habitat for flying insects.

Foraging raptors and mammalian predators may occur in orchards of the PPSA from time to time. Raptors adapted to hunt within the tree canopy such as Cooper's hawks (*Accipiter cooperii*) and sharp-shinned hawks (*Accipiter striatus*) may forage for small birds in orchards. Mammalian predators potentially occurring in orchards of the PPSA would most likely be limited to raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), coyotes (*Canis latrans*) and red foxes (*Vulpes vulpes*), as these species are relatively tolerant of human disturbance.

2.3.2 Agricultural Field

Agricultural field comprised much of the southeastern portion of the PPSA. A highly-maintained corn field (*Zea mayz* ssp. *mays*) of approximately 50 acres was present within the circular train tracks of the railroad yard. South of the tracks was a dry-farmed wheat field (*Triticum* sp.) of approximately 10 acres that appeared to have little, if any, ongoing

maintenance. The wheat field contained some non-native annuals, including Rancher's fireweed (*Amsinckia intermedia*) and barnyard barley (*Hordium murinum* ssp. *leporinum*).

Intensive agricultural practices on the corn field of the PPSA likely limit its value to wildlife; however, some wildlife species undoubtedly use this field. By contrast, the dry-farmed wheat field appears to have a much lower disturbance regime, and would be expected to be used by a greater complement of wildlife species. Amphibians with the potential to use either field include Pacific chorus frogs and western toads, both of which may breed in nearby temporary irrigation ditches and subsequently disperse through the fields. Reptiles that could occur in the fields include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), Pacific gopher snake, and common kingsnake.

Agricultural fields also provide foraging habitat for a number of avian species. Common resident species likely to forage in the agricultural fields of the PPSA include mourning doves and American crows (*Corvus brachyrhynchos*), both of which were observed during the survey, as well as mixed flocks of Brewer's blackbirds (*Euphagus cyanocephalus*), brown-headed cowbirds (*Molothrus ater*), and European starlings (*Sturnus vulgaris*). Summer migrants that would be common on agricultural lands of the PPSA include the western kingbird, also observed during the survey, while common winter migrants include the savannah sparrow (*Passerella sandwichensis*) and American pipit (*Anthus rubescens*).

A few mammal species may also occur within the agricultural fields of the PPSA. During the field survey, numerous California ground squirrel (*Otospermophilus beecheyi*) and Botta's pocket gopher burrows were observed in the dry-farmed wheat field, along with several individual ground squirrels. This field, with its relatively low level of disturbance, is also likely to be used by deer mice and California voles. By contrast, burrowing rodent activity in the corn field appeared limited to the field margins. Other small mammals that may occur from time to time within the agricultural fields of the PPSA include black-tailed hares (*Lepus californicus*) and Audubon's cottontails. Various species of bat may also forage over the fields of the PPSA for flying insects.

The presence of amphibians, reptiles, birds and small mammals—particularly on the dry-farmed wheat field—is likely to attract foraging raptors and mammalian predators. Raptors such as red-tailed hawks (*Buteo jamaicensis*), American kestrels (*Falco sparverius*), and various owls would likely forage over agricultural fields of the PPSA; two red-tailed hawks and a kestrel were observed during the field survey. Mammalian predators occurring in agricultural fields of the PPSA would be the same as those described for orchard habitat.

2.3.3 Ruderal

Ruderal (disturbed) areas consisted of the roads and railroad tracks of the PPSA, as well as the margins of these roads and tracks, and the barren or sparsely vegetated strips of land bordering the industrial/residential areas, irrigation ditches, and orchards. Ruderal areas contained a sparse cover of common agricultural weeds, which included common sunflower (*Helianthus annuus*), Russian thistle (*Salsola tragus*), barnyard barley, Rancher's fireweed, puncturevine (*Tribulus terrestris*), and Bermuda grass (*Cynodon dactylon*). A few individual blue gum eucalyptus (*Eucalyptus globulus*) and Washington fan palm (*Washingtonia filifera*) trees were located along the ruderal margin of Highway 99 on the eastern boundary of the western block of the PPSA. Two small-flowered tamarisk (*Tamarisk parviflora*) were located in ruderal areas along the southern boundary of the western block of the PPSA. Three elderberry shrubs (*Sambucus nigra* spp. *caerulea*) and several unidentified ornamental shrubs were located in the expanse of ruderal land northeast of the Foster Farms industrial complex.

Although the wildlife habitat value of ruderal lands within the PPSA is relatively low, these lands certainly support some wildlife species. The reptile and amphibian species listed for agricultural fields could potentially use ruderal habitats of the PPSA, as well. Mourning doves, northern mockingbirds (*Mimus polyglottos*), and house sparrows (*Passer domesticus*) could be expected to occur on these ruderal lands, as could the disturbance-tolerant killdeer (*Charadrius vociferous*), which often nests on gravel or bare ground. At the time of the field survey, a pair of red-tailed hawks appeared to be nesting in one of the eucalyptus trees bordering the western block of the PPSA along the ruderal margin of Highway 99; the hawks were observed coming and going from one of the trees, and flying over adjacent lands. Swainson's hawks (*Buteo swainsoni*) also have the potential to nest in these trees, as they have been known to do in

eucalyptus elsewhere along Highway 99. The eucalyptus trees could also be used for nesting by western kingbirds or Bullock's orioles (*Icterus bullockii*). The fan palm tree in the western block of the PPSA may be used for nesting by hooded orioles (*Icterus cucullatus*) and European starlings.

Small mammals that would be expected to occur on ruderal lands of the PPSA include California ground squirrels, Botta's pocket gophers, deer mice, California voles, and house mice. Numerous California ground squirrel burrows were observed along the ruderal margins of roads, ditches, and railroad tracks, as well as in the expanse of ruderal land northeast of the Foster Farms industrial complex. Mammalian predators with the potential to occur on ruderal lands of the study area include disturbance-tolerant species such as the raccoon, red fox, and coyote.

2.3.4 Industrial/Residential

Industrial/residential areas comprised a small portion of the PPSA. A Foster Farms industrial plant was identified south of Avenue 360 and west of the railroad yard. Two small residences were observed within the northwestern portion of the PPSA. Parking areas surrounding the structures had a gravel substrate. Industrial/residential areas were barren of vegetation.

A number of wildlife species adapted to human disturbance could be expected to occur in the industrial/residential land of the PPSA. For example, amphibians such as Pacific chorus frogs and western toads might disperse through industrial/residential land during the winter and spring, and reptiles such as the western fence lizard and common garter snake (*Thamnophis sirtalis*) could forage in this land use type. Buildings and other human-made structures located within the industrial/residential land of the PPSA provide potential nesting habitat for a number of avian species such as the house finch (*Haemorhous mexicanus*), house sparrow, and Eurasian collared dove (*Streptopelia decaocto*); all were observed during the field surveys. Mammal species attracted to this land use type may include the house mouse, Norway rat (*Rattus norvegicus*), and Virginia opossum (*Didelphis virginiana*).

Birds of prey may occasionally forage over the industrial/residential areas. The red-tailed hawk and American kestrel are likely visitors; both were observed on or near industrial/residential land of the site during the field surveys.

2.3.5 Irrigation Ditch

Two irrigation ditches ran through the PPSA and included portions of the Banks Ditch and Traver Canal. The Banks Ditch, identified as such on the USGS *Traver* quadrangle, is an earthen irrigation ditch approximately 20 feet in width passed through the eastern block of the PPSA. This feature traversed the eastern boundary of the PPSA along Road 44 from north to south, turned 90 degrees to the west between the circular train tracks on the north and dry-farmed wheat field on the south, and finally passed out of the PPSA under Highway 99. The ditch was dry during the spring field survey. Even during the peak of spring, all vegetation observed within the ditch was brown and dried, suggesting spraying with herbicide. The vegetation that was observed was dominated by bearded sprangletop (*Leptochloa fusca* ssp. *fascicularis*), with sparse Bermuda grass, tall flatsedge (*Cyperus eragrostis*), and Russian thistle.

The Traver Canal is an earthen irrigation ditch approximately 20 feet in width located along the northern boundary of the northern portion of the PPSA and the south side of Avenue 368. During the surveys this ditch was also dry and was dominated by the same vegetation as the Banks Ditch.

Due to the lack of vegetation in the irrigation ditches, this habitat would be of limited value to native wildlife. However, the introduced bullfrog (*Lithobates catesbeianus*) and mosquitofish (*Gambusia affinis*) may occur in the ditches during periods of inundation; these and other prey species may attract wading birds such as the great blue heron (*Ardea herodias*) and great egret (*Ardea alba*). Cliff swallow (*Petrochelidon pyrrhonota*) could potentially nest in the culverts at Road 44's crossing of the Banks Ditch or the Canal Drive or Burke Drive crossing of the Traver Canal; however, no swallow nests were observed at the time of the field survey.

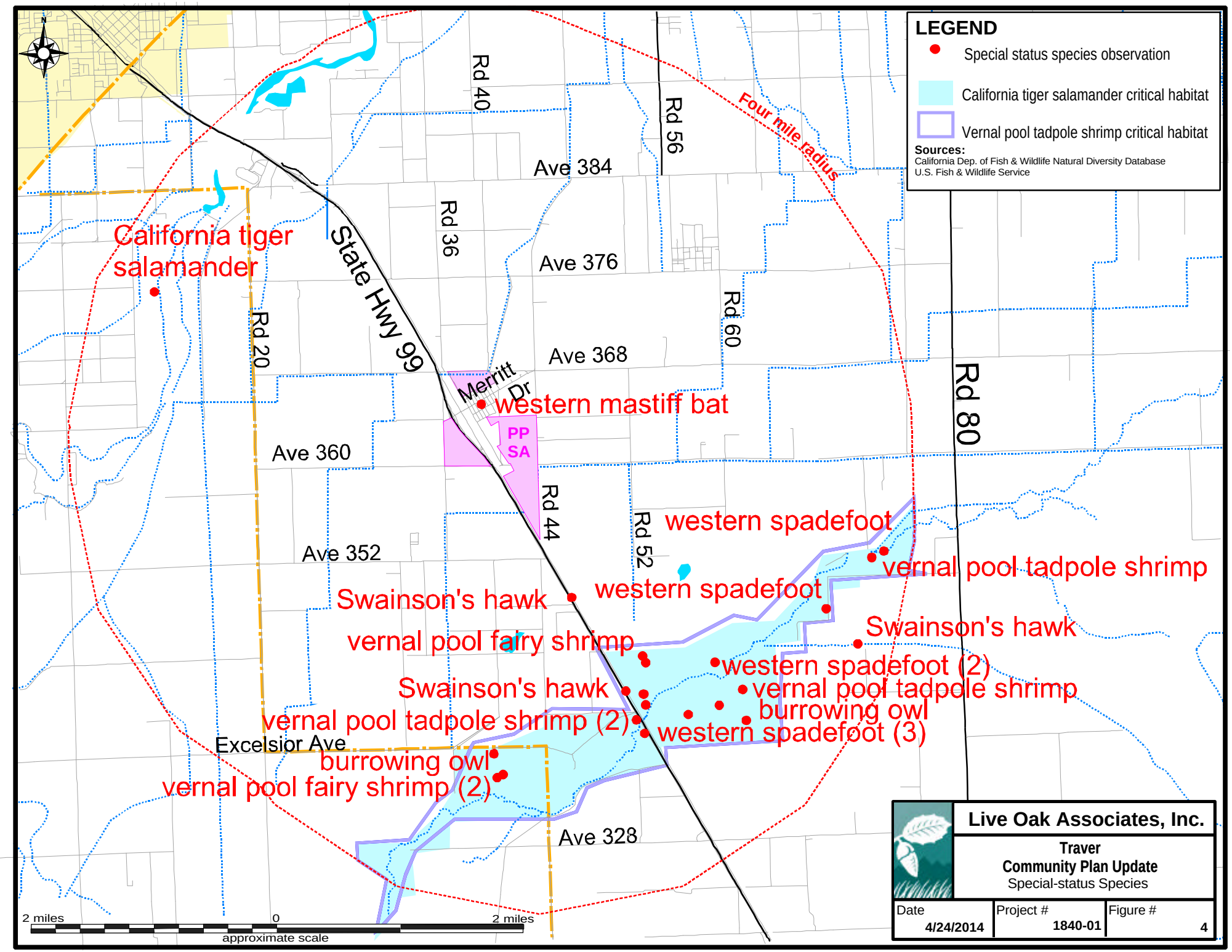
2.4 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife

Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as "special status species."

A number of special status plants and animals occur in the vicinity of the PPSA (Figures 4 and 5). These species, and their potential to occur within the PPSA, are listed in Table 1 in the following pages. Sources of information for this table included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990), *California Natural Diversity Data Base* (CDFW 2014), *Endangered and Threatened Wildlife and Plants* (USFWS 2014), and *The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2014). It is important to note that the California Natural Diversity Data Base (CNDDB) is a volunteer database; therefore, it may not contain all known literature records.

A search of published accounts for all of the relevant special status plant and animal species was conducted for the *Traver* USGS 7.5-minute quadrangle in which the project site occurs, and for the eight surrounding quadrangles (*Burris Park, Selma, Reedley, Orange Cove South, Monson, Visalia, Goshen,* and *Remnoy*) using the CNDDB Rarefind 5 (2014) program.


LEGEND
Special status species observation
California tiger salamander critical habitat
Vernal pool tadpole shrimp critical habitat
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
U.S. Fish & Wildlife Service
Four mile radius
Rd 40
Rd 56
Ave 384
Rd 36
Ave 376
Rd 60
Rd 20
State Hwy 99
Ave 368
Merritt Dr
Rd 80
western mastiff bat
PP
SA
Ave 360
Rd 44
Rd 52
western spadefoot
Ave 352
vernal pool tadpole shrimp
Swainson's hawk
western spadefoot
vernal pool fairy shrimp
Swainson's hawk
western spadefoot (2)
Swainson's hawk
vernal pool tadpole shrimp
burrowing owl
vernal pool tadpole shrimp (2)
western spadefoot (3)
Excelsior Ave
burrowing owl
vernal pool fairy shrimp (2)
Ave 328
California tiger salamander
2 miles
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Live Oak Associates, Inc.
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Special-status Species
Date
4/24/2014
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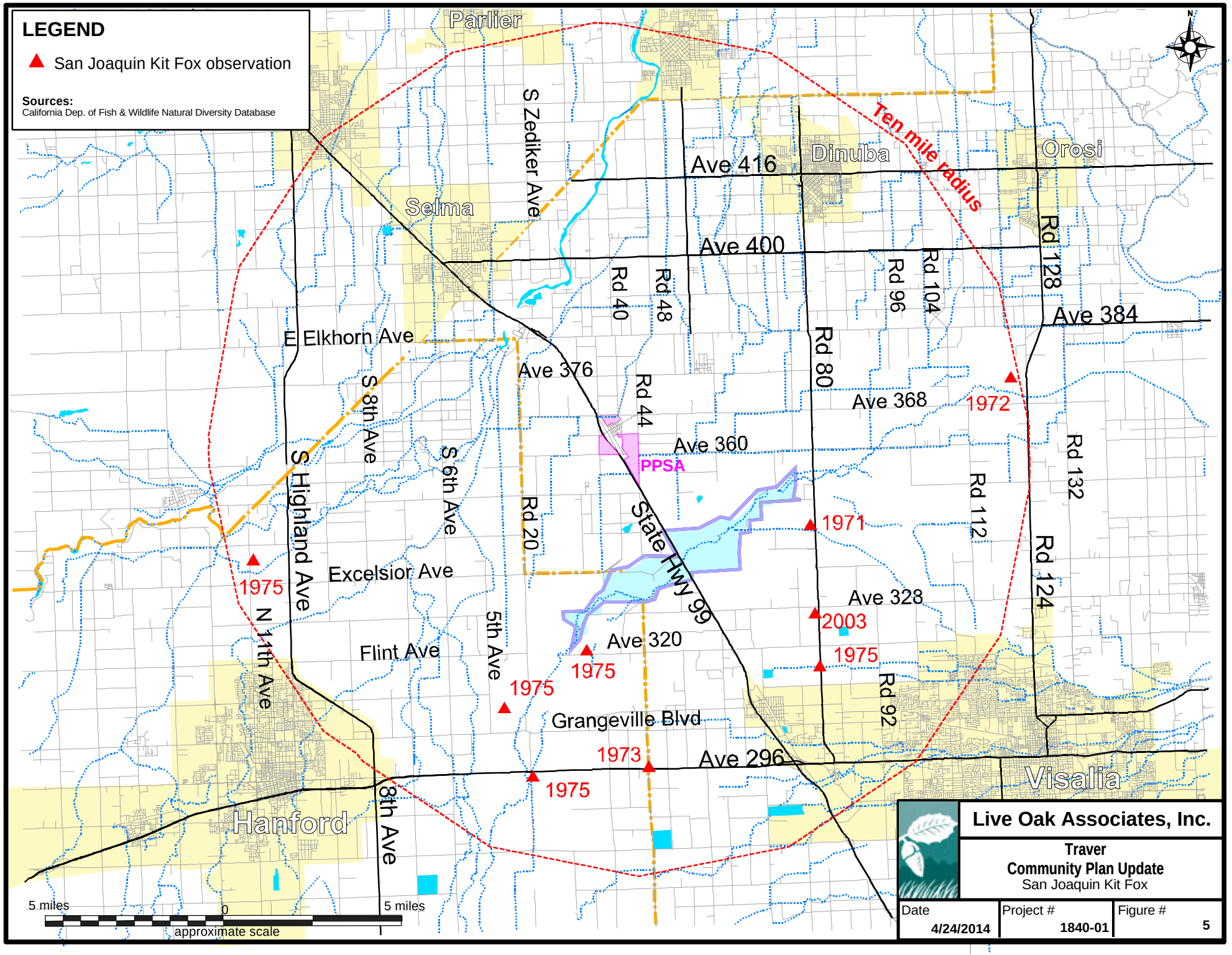
LEGEND
San Joaquin Kit Fox observation
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
Parlier
Selma
Dinuba
Orosi
Visalia
Hanford
Ten mile radius
S Zediker Ave
Ave 416
Ave 400
Ave 384
Ave 376
Ave 368
Ave 360
Ave 328
Ave 320
Ave 296
Rd 40
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E Elkhorn Ave
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S 6th Ave
S Highland Ave
N 11th Ave
Excelsior Ave
Flint Ave
5th Ave
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PPSA
1972
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Live Oak Associates, Inc.
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TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE TRAVER PPSA

PLANTS (adapted from CDFW 2014 and CNPS 2014)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence within the PPSA
Hoover's Spurge (*Chamaesyce hooveri*)	FT, CNPS 1B	This annual occurs in vernal pools of California's Central Valley; blooms July-September; elevation 80-820 ft.	**Absent.** Vernal pools are absent from the PPSA.
San Joaquin Valley Orcutt Grass (*Orcuttia inaequalis*)	FE, CE CNPS 1B	This annual occurs in vernal pools of the Central Valley; requires deep pools with prolonged periods of inundation; blooms April-September; elevation 100-2,480 ft.	**Absent.** Vernal pools are absent from the PPSA.
San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*)	FT, CE CNPS 1B	This annual sunflower occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series. Blooms March-April; elevation 300-2,625 ft.	**Absent.** Suitable heavy clay soils of the Porterville and Centerville series are absent from the PPSA.

CNPS-Listed Plants

Heartscale (*Atriplex cordulata* var. *cordulata*)	CNPS 1B	Occurs on saline or alkaline soils in chenopod scrub, meadows, seeps, and grasslands; blooms April-October; elevations below 1,230 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Earlimart Orache (*Atriplex cordulata* var. *erecticaulis*)	CNPS 1B	Occurs in valley and foothill grassland between 130 and 330 ft. in elevation; blooms August-September.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Brittlescale (*Atriplex depressa*)	CNPS 1B	Occurs in relatively barren areas with alkaline clay soils in chenopod scrub, playas, grasslands, and vernal pools of the Central Valley; blooms April-October; elevations below 1,050 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Lesser saltscale (*Atriplex minuscula*)	CNPS 1B	Occurs widely scattered locations of California's Central Valley with sandy alkaline soils in chenopod scrub, valley grasslands, and vernal pools; blooms May-October; elevation 50-660 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Subtle Orache (*Atriplex subtilis*)	CNPS 1B	Occurs in valley and foothill grassland; blooms August-October; elevation 130-330 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Recurved Larkspur (*Delphinium recurvatum*)	CNPS 1B	Occurs on alkaline soils in chenopod scrub, cismontane woodland, and grasslands; blooms March-June; elevations below 2,500 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Spiny-Sepaled Button Celery (*Eryngium spinoseplaum*)	CNPS 1B	This annual/perennial occurs in vernal pools and valley and foothill grasslands of the San Joaquin Valley and the Tulare Basin; blooms April-May; elevation 330-840 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE TRAVER PPSA

ANIMALS (adapted from CDFW 2014)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence within the PPSA
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** Habitat suitable for this species is absent from the project site.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	FE	Primarily found in vernal pools, but may use other seasonal wetlands in mesic valley and foothill grasslands.	**Absent.** Habitat suitable for this species is absent from the project site.
Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)	FT	Lives in mature elderberry shrubs of California's Central Valley and Sierra Foothills.	**Possible.** Three elderberry shrubs are located on the eastern block of the PPSA, within ruderal land bordering an industrial complex and railroad yard and one elderberry shrub is located adjacent to the northwest border of the northern section PPSA. Due to the isolation of these shrubs from other elderberry shrubs and the extremely marginal nature of surrounding habitats, VELB occupation of the PPSA is a remote possibility at best.
California Tiger Salamander (*Ambystoma californiense*)	FT, CT	Found primarily in annual grasslands; requires vernal pools for breeding and rodent burrows for aestivation. Although most CTS aestivate within 0.4 mile of their breeding pond, outliers may aestivate up to 1.3 miles away (Orloff 2011).	**Absent.** Habitat suitable for breeding is absent from the PPSA and surrounding lands within approx.. 1.5 miles. Rodent burrows in the PPSA are situated in habitat that would be considered marginal to unsuitable for CTS aestivation, restricted as they are to a dry-farmed wheat field, and the ruderal margins of roads, industrial areas, and the irrigation ditch. Moreover, these burrows are too remote from potential breeding habitat to be used by CTS for aestivation.
Swainson's Hawk (*Buteo swainsoni*)	CT	This breeding-season migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Likely.** Swainson's hawks could nest in the eucalyptus trees along Highway 99 that borders sections of the PPSA. Hawks could forage over the small dry-farmed wheat field located at the southern extent of the easternmost block of the PPSA, where burrowing rodent activity was abundant, and over the corn field after harvest
San Joaquin Kit Fox (*Vulpes macrotis mutica*)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (6 to 10 inches in diameter) ground squirrel burrows as denning habitat.	**Unlikely.** Intensive agricultural practices, highly modified habitats, and ongoing disturbance make kit fox habitation of the PPSA unlikely. Individuals may occasionally disperse or pass through the site, however. There have been 9 documented SJKF occurrences within 10 miles of the PPSA, eight of which date back to the 1970's.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE TRAVER PPSA

ANIMALS – cont'd.

State Species of Special Concern or Fully Protected

Species	Status	Habitat	Occurrence within the PPSA
Western Spadefoot (*Spea hammondii*)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	**Absent.** Habitat suitable for breeding is absent from the PPSA and surrounding lands within approximately 1.5 miles. Rodent burrows within the PPSA are located within marginal habitats too remote from potential breeding habitat to be used for aestivation by spadefoot.
Northern Harrier (*Circus cyaneus*)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands. Nests on ground, generally in wet areas, although grassland, pasture, and cultivated fields may be used.	**Possible.** This species may forage within and adjacent to the PPSA, but breeding habitat is absent from the site.
White-tailed Kite (*Elanus leucurus*)	CFP	Occurs in savannah, open woodlands, marshes, desert grassland, and cultivated fields. Prefer lightly grazed or ungrazed fields for foraging.	**Possible.** White-tailed kites do not generally nest along roads or in urban areas (Erichsen 1995), making it unlikely that individuals of this species would use trees on or adjacent to the PPSA. However, kites could forage over the small dry-farmed wheat field located at the southern extent of the easternmost block of the PPSA, where burrowing rodent activity was abundant.
Western Pond Turtle (*Actinemys marmorata*)	CSC	Occurs in open slow-moving water or ponds with rocks and logs for basking. Nesting occurs in open areas, on a variety of soil types, and up to ¼ mile away from water. This species is almost extinct in the southern San Joaquin Valley.	**Unlikely.** The irrigation ditches of the PPSA are unsuitable for western pond turtles due to lack of basking structures and intermittent flow. Moreover, the closest documented occurrence of pond turtle was recorded over 10 miles from the PPSA in 1879.
Burrowing Owl (*Athene cunicularia*)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	**Possible.** Suitably-sized burrows on the PPSA are restricted to the dry-farmed wheat field and the ruderal margins of roads, industrial areas, and the irrigation ditches; all but the small wheat field would be considered marginal for burrowing owl due to high levels of human disturbance. However, it is remotely possible that owls could roost or nest in burrows of the PPSA and forage in on-site agricultural fields.
Loggerhead Shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. Can often be found in cropland.	**Possible.** Marginal nesting habitat for shrikes is available in trees of the PPSA, and shrikes could forage in on-site agricultural fields.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE TRAVER PPSA

ANIMALS – cont'd.

State Species of Special Concern or Fully Protected

Species	Status	Habitat	Occurrence within the PPSA
Tricolored Blackbird (*Agelaius tricolor*)	CSC	Breeds in colonies near fresh water, primarily emergent wetlands, with tall thickets. Forages in grassland and cropland habitats.	**Possible.** Suitable foraging habitat for tricolored blackbirds occurs in the agricultural fields of the PPSA, but breeding habitat is absent.
Pallid Bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally take insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	**Possible.** Individuals of this species could potentially roost in trees or buildings of the PPSA, and forage in or over agricultural fields and orchards.
Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)	CSC	Found in open, arid to semi-arid habitats, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces, but may also use high buildings, trees, and tunnels.	**Possible.** Individuals of this species could potentially roost in trees or buildings of the PPSA, and forage in flight over agricultural fields.

Occurrence Terminology:

Present:	Species observed on the site at time of field surveys or during recent past.
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible:	Species not observed on the site, but it could occur there from time to time.
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.
Absent:	Species not observed on the site, and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FPT	Federally Threatened (Proposed)	CFP	California Fully Protected
FC	Federal Candidate	CSC	California Species of Special Concern

CNPS	California Native Plant Society Listing		
1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

2.5 ENDANGERED, THREATENED, OR SPECIAL STATUS PLANT AND ANIMAL SPECIES MERITING FURTHER DISCUSSION

2.5.1 Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). Federal Listing Status: Threatened; State Listing Status: None.

Ecology of the species. The USFWS listed the valley elderberry longhorn beetle (VELB) as a threatened species under provisions of the Federal Endangered Species Act in 1980 after alteration of the species' habitat reduced the known populations of the beetle to a few areas in the Central Valley. On October 2, 2012, the VELB was proposed for removal from the federal list of endangered and threatened wildlife (50 CFR Part 17); however, until delisting actually occurs, federal protections for this species remains in place.

The VELB is generally found along waterways and in floodplains that support blue elderberry shrubs, as both larvae and adults feed only on this plant. After mating in June, female VELB lay their eggs in crevices of elderberry bark. Upon hatching, the larvae tunnel into the stems of the shrub, where they spend 1-2 years eating the interior wood. The larvae metamorphose into adults in the springtime, exiting the elderberry shrubs through holes chewed through the wood. Because the exit holes persist, they can be used as an indicator of past and/or present VELB usage. Although VELB are not known to be strong fliers, they may fly up to two miles when intact elderberry habitat is available. The dispersal capabilities of the VELB are little known; however, in the Central Valley it is likely they follow drainage courses where elderberries regularly grow.

Potential to occur onsite. Three elderberry shrubs are located within an expanse of ruderal land northeast of the Foster Farms industrial complex. The shrubs are bounded by a circular driveway associated with the industrial complex, and beyond that, a parking lot, industrial buildings, and the adjacent railroad yard. Analysis of aerial imagery suggests that the closest riparian corridor—and presumably, the closest intact elderberry habitat—is approximately 4 miles west of these shrubs at Peoples Ditch. The closest documented occurrence of VELB is approximately 10 miles north of the shrubs near Reedley. Due to the apparent isolation of these shrubs from other elderberries and likely source populations of VELB, habitation of the shrubs by VELB is

only a remote possibility. No exit holes were observed in the stems of these shrubs at the time of the field survey.

A focused survey for elderberry shrubs was not conducted as part of the present analysis. Additional shrubs might occur elsewhere in the PPSA on lands not accessible or fully visible at the time of the April and June 2014 field surveys, which included orchard interiors and the heart of the industrial complex. However, if elderberry shrubs are present in these areas, they would be unlikely to be inhabited by VELB for the reasons given above.

2.5.2 Swainson's Hawk (*Buteo swainsoni*). Federal Listing Status: None; State Listing Status: Threatened

Ecology of the species. Swainson's hawks are large, long-winged, broad-tailed hawks with a high degree of mate and territorial fidelity. They are breeding season migrants to California, arriving at their nesting sites in March or April. The young hatch sometime between March and July and fledge 4 to 6 weeks later. By October, most birds have left for wintering grounds in South America. In the Central Valley, Swainson's hawks typically nest in large trees along riparian systems, but may also nest in oak groves, or lone, mature trees in agricultural fields or along roadsides. Nest sites are typically located adjacent to suitable foraging habitat. Swainson's hawks forage in large, open fields with abundant prey, including grasslands or lightly grazed pastures, alfalfa and other hay crops, and certain grain and row croplands. Their designation as a California Threatened species is based on population decline due in part to loss of foraging habitat to urban development (CDFG 1994).

Potential to occur onsite. Swainson's hawks are well-known from the vicinity of the PPSA. The CNDDB lists three nesting occurrences of Swainson's hawks within a four-mile radius of the PPSA (see Figure 4), including two nests in eucalyptus trees in the median of Highway 99. The PPSA consists primarily of *Prunus* sp. orchard land unsuitable for nesting and foraging by Swainson's hawk. However, Swainson's hawks could nest in the eucalyptus trees along Highway 99 that border the western block of the PPSA, or in the eucalyptus trees along Highway 99 approximately 200 feet west of the eastern block and 500 feet west of the northern block of the PPSA. The trees west of the eastern block is more likely, as suitable foraging habitat—

including the small dry-farmed wheat field of the PPSA—occurs immediately adjacent to these trees. Swainson's hawks are likely to forage in the dry-farmed wheat field of the PPSA, where burrowing rodent activity was prevalent at the time of the field survey. Swainson's hawks may occasionally forage in the corn field of the PPSA, after harvest, but this field represents only a marginal foraging option for this species due to intensive agricultural practices, an apparent lack of small mammal prey, and a high level of surrounding disturbance.

2.5.3 San Joaquin Kit Fox (*Vulpes macrotus mutica*). Federal Listing Status: Endangered; State Listing Status: Threatened

Ecology of the species. By the time the San Joaquin kit fox (SJKF) was listed as federally endangered in 1967 and California threatened in 1971, it had been extirpated from much of its historic range. The smallest North American member of the dog family (Canidae), the kit fox historically occupied the dry plains of the San Joaquin Valley, from San Joaquin County to southern Kern County (Grinnell et al. 1937). Local surveys, research projects, and incidental sightings indicate that kit fox currently occupy available habitat on the San Joaquin Valley floor and in the surrounding foothills. Core SJKF populations are located in the natural lands of western Kern County, the Carrizo Plain Natural Area in San Luis Obispo County, and the Ciervo-Panoche Natural Area in western Fresno and eastern San Benito Counties (USFWS 1998).

The SJKF prefers habitats of open or low vegetation with loose soils. In the southern and central portion of the Central Valley, kit fox are found in valley sink scrub, valley saltbrush scrub, upper Sonoran subshrub scrub, and annual grassland (USFWS 1998). Kit fox may also be found in grazed grasslands, urban settings, and in areas adjacent to tilled or fallow fields (USFWS 1998). They require underground dens to raise pups, regulate body temperature, and avoid predators and other adverse environmental conditions (Golightly and Ohmart 1984). In the central portion of their range, they usually occupy burrows excavated by small mammals such as California ground squirrels. The SJKF is primarily carnivorous, feeding on black-tailed hares, desert cottontails, rodents, insects, reptiles, and some birds.

Potential to occur onsite. Over two-thirds of the PPSA comprises orchard and industrial/residential land uses unsuitable for kit fox denning and foraging. The remaining one-third of the PPSA consists of the highly-maintained corn field and dry-farmed wheat field east of Highway 99. The corn field is unsuitable for denning by kit fox due to regular ground disturbance and high levels of surrounding human activity, and only marginally suitable for foraging due to an apparent lack of small mammal prey. The dry-farmed wheat field does not appear to be regularly maintained, and at the time of the field survey appeared to support a considerable population of burrowing rodents; therefore, this field could conceivably be used by kit fox for both foraging and denning.

However, in order to access habitats of the PPSA, kit fox must first occur in the project vicinity. This is unlikely for several reasons. First, kit fox have never been documented on the PPSA or surrounding lands. The closest documented observation of kit fox is from approximately four miles southeast of the PPSA in remnant natural lands north of the St. John's River (see Figure 5). Second, all documented occurrences of kit fox within ten miles of the PPSA are from more than 35 years ago, save a 2003 occurrence documented in an alfalfa field approximately 5.5 miles southeast of the PPSA. Third, all kit fox observations within ten miles of the PPSA have been made in natural lands associated with waterways or in large expanses of agricultural fields; there is not a regional precedent for kit fox occurrence in small agricultural fields isolated from other potential habitat by a matrix of orchards and industrial and urban uses. Finally, the PPSA is situated over 70 miles away from the nearest kit fox core populations.

In summary, the San Joaquin kit fox is not expected to occur within the PPSA because 1) they have never been documented in the immediate vicinity of the PPSA, 2) their occurrence in the larger vicinity of the PPSA is primarily historical in nature, and 3) what little habitat exists for this species within the PPSA is surrounded by extensive unsuitable habitats.

2.5.4 Burrowing Owl (*Athene cunicularia*). Federal Listing Status: None; State Listing Status: Species of Special Concern.

Ecology of the species. The burrowing owl is primarily a grassland species, but may also occur in open shrub lands, grazed pastures, and occasionally agricultural lands. The primary indicators

of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation, with only sparse areas of shrubs or taller vegetation. Burrowing owls roost and nest in the burrows of California ground squirrels, and occasionally also badger, coyote, or fox. The burrowing owl diet includes a broad array of arthropods, small rodents, birds, reptiles, and amphibians. In California, burrowing owl survival and reproductive success appears linked to rodent populations, particularly California vole (*Microtus californicus*) (Gervais et al. 2006). In agricultural areas of the San Joaquin Valley, burrowing owls primarily forage within 600 meters of their nest burrows (Gervais et al. 2003). The burrowing owl was designated a California Species of Special Concern in 1978 following long-term population decline, primarily due to loss of habitat to development and agricultural practices.

Potential to occur onsite. Burrowing owls could theoretically roost or nest in those portions of the PPSA containing burrows of suitable size, and forage in open areas supporting a sufficient prey base. Burrows of suitable size for burrowing owl are located along the ruderal margins of roads and irrigation ditches throughout the PPSA, in and around the industrial complex and railroad yard, and throughout the dry-farmed wheat field. High levels of human disturbance and lack of nearby foraging opportunities would likely preclude burrowing owls from roosting or nesting in most such areas; however, burrows adjacent to the agricultural fields of the PPSA along Banks Ditch and Road 44 and burrows throughout the dry-farmed wheat field could potentially be used. Open areas suitable for foraging consist of the dry-farmed wheat field and possibly also the highly-maintained corn field, although intensive agricultural practices in the latter likely limit prey availability.

Burrowing owls are known to occur in the PPSA vicinity. The CNDDB lists two occurrences of burrowing owl within a four-mile radius of the PPSA (see Figure 4), both located near Cross Creek between 2 and 3 miles south and southeast of the dry-farmed wheat field, which represents the southern extent of the PPSA.

2.6 JURISDICTIONAL WATERS

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds,

reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the CDFW, and the California Regional Water Quality Control Board (RWQCB). See Section 3.2.4 of this report for additional information.

The PPSA contains two irrigation ditches (Banks Ditch and Traver Canal) that would likely be considered jurisdictional by the USACE on the basis of their connections with jurisdictional waters both upstream and downstream of the PPSA. Banks Ditch passes through the eastern block of the PPSA for a distance of approximately 3,400 linear feet and is connected to Cross Creek. Cross Creek historically flowed into Tulare Lake, which at times used to overflow into the San Joaquin River. Now Cross Creek ends in a series of distributary channels within the Tulare Lake Bed. Traver Canal passes through the northern bock of the PPSA for a distance of approximately 2,235 feet and is connected to the Kings River. The USACE has set a precedent of claiming tributaries of the Tulare Lake Basin due to historic connectivity and the Kings River is also a jurisdictional water. The USACE considers artificially constructed waterways such as Banks Ditch and Traver Canal jurisdictional if they both receive and deliver water to a water of the U.S. Therefore, Banks Ditch and Traver Canal would likely also be considered a water of the U.S.

2.7 DESIGNATED CRITICAL HABITAT

As will be discussed further in Section 3.2.3, the USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Designated critical habitat is absent from the PPSA. However, as shown on Figure 4, critical habitat for both the California tiger salamander and vernal pool tadpole shrimp occurs in natural lands surrounding Cross Creek, 1 to 3 miles south and southeast of the PPSA.

2.8 NATURAL COMMUNITIES OF SPECIAL CONCERN

Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, home to special status species, etc. CDFW is responsible for

the classification and mapping of all natural communities in California. Natural communities are assigned state and global ranks according to their degree of imperilment. Any natural community with a state rank of 3 or lower (on a 1-5 scale) is considered of special concern. Examples of natural communities of special concern in the vicinity of the project site include vernal pools and various types of riparian forest (Sawyer, Keeler-Wolf and Evens 2012).

All of the vegetation associations present on the project site are man-made and dominated by non-native species, and therefore would not be considered natural communities of special concern.

2.9 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation. No portion of the PPSA has the potential to function as a wildlife movement corridor. However, the Pacific flyway, one of four major bird migration routes in North America, passes over the PPSA and much of the rest of California.

3.0 IMPACTS AND MITIGATIONS

3.1 SIGNIFICANCE CRITERIA

General plans, area plans, and specific projects are subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of proposed projects on the environment prior to project implementation. Impacts to biological resources are just one type of environmental impact assessed under CEQA, and vary from project to project in terms of scope and magnitude. Projects requiring removal of vegetation may result in the mortality or displacement of animals associated with this vegetation. Animals adapted to humans, roads, buildings, and pets may replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. Such impacts may be considered either "significant" or "less than significant" under CEQA. According to *California Environmental Quality Act, Statute and Guidelines* (AEP 2012), "significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered "significant" if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a "mandatory finding of significance" if the project has the potential to:

> "Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory."

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 General Plan Policies of County of Tulare

In compliance with CEQA, the lead agency must consider conformance with applicable goals and policies of the General Plan of the County of Tulare. The Tulare County General Plan released an update in 2003 that is valid through 2030. Implementation of goals in the Tulare County General Plan is accomplished via a set of policies specific to each goal. Please refer to Appendix F for a copy of the plan.

Relevant biological resource goals of the Tulare County General Plan include:

- protecting rare and endangered species;

- limiting development in environmentally sensitive areas;

- encouraging cluster development in areas with moderate to high potential for sensitive habitat;

- encouraging the planting of native trees, shrubs, and grasslands preserve;

- requiring open space buffers between development projects and significant watercourse, riparian vegetation, wetlands, and other sensitive habitats and natural communities;

- coordinating with other government land management agencies to preserve and protect biological resources;
- encouraging appropriate access to resource-managed lands;
- providing opportunities for hunting and fishing activities;
- implementing pesticide controls to limit effects on natural resources; and
- supporting the establishment and administration of a mitigation banking program.

3.2.2 Threatened and Endangered Species

Permits may be required from the USFWS and/or CDFW if activities associated with a proposed project have the potential to result in the "take" of a species listed as threatened or endangered under the federal and/or state Endangered Species Acts. "Take" is defined by the state of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). The CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.3 Designated Critical Habitat

The USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is defined by section 3(5)(A) of the federal Endangered Species Act as "(i) The specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species." The Act goes on to define "conservation" as "the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which listing under the Act is no longer necessary."

The designation of a specific area as critical habitat does not directly affect its ownership. Federal actions that result in destruction or adverse modification of critical habitat are, however, prohibited in the absence of prior consultation with the USFWS according to provisions of the act. Furthermore, recent appellate court cases require that federal actions affecting critical habitat promote the recovery of the listed species protected by the critical habitat designation.

The USFWS designates critical habitat for a species by identifying general areas likely to contain the species' "primary constituent elements," or physical or biological features of the landscape that the species needs to survive and reproduce. Although a unit of critical habitat for a particular species may be quite large, only those lands within the unit that contain the species' primary constituent elements are actually considered critical habitat by the USFWS.

3.2.4 Migratory Birds

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all birds native to the United States, even those that are non-migratory. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs. Additionally, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800).

3.2.5 Birds of Prey

Birds of prey are protected in California under provisions of the Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

3.2.6 Nesting Birds

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of "take" by the CDFW.

3.2.7 Wetlands and Other Jurisdictional Waters

Natural drainage channels and adjacent wetlands may be considered "waters of the United States" or "jurisdictional waters" subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands:
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As determined by the United States Supreme Court in its 2001 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated *Carabell/Rapanos* decision, the U.S. Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable and therefore jurisdictional water.

The USACE regulates the filling or grading of jurisdictional waters under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high water marks" on opposing channel banks. All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards.

The filling of isolated wetlands, over which the USACE has disclaimed jurisdiction, is regulated by the RWQCB. It is unlawful to fill isolated wetlands without filing a Notice of Intent with the RWQCB. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code (2003). Activities that would disturb these waters are regulated by the CDFW via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

3.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION

The 383-acre PPSA is proposed for inclusion in the Traver Community Plan area. The following subsections assume that all habitats of the PPSA will be impacted by future development under a number of individual projects. Potentially significant project impacts to biological resources and mitigations are discussed below.

3.3.1 Project Impacts to the Valley Elderberry Longhorn Beetle (Prior to Delisting)

Potential Impacts. As discussed in Section 2.5.1 of this document, three elderberry shrubs are located on ruderal land associated with the Foster Farms industrial complex (see Figure 3), and

additional shrubs could theoretically be present in those portions of the orchards and industrial complex that were not accessible/visible at the time of the April and June 2014 field surveys. Shrubs of the PPSA are unlikely to be inhabited by VELB due to their location within a mosaic of highly disturbed lands and their isolation from riparian areas and other elderberry shrubs. For the same reasons, project-related removal of these shrubs would not constitute significant loss of habitat under CEQA. However, because the USFWS considers the removal of elderberry shrubs below 3,000 feet in elevation with stems greater than one inch in diameter tantamount to "take" of VELB, USFWS incidental take authorization would be required before the shrubs could be removed by project activities.

Although highly unlikely, project-related mortality of individual beetles is a significant impact of future development of the PPSA under CEQA. In the absence of USFWS incidental take authorization, any project-related mortality of VELB would violate the federal Endangered Species Act.

Mitigation. The following measures adapted from the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999) (Appendix D) will be implemented, as applicable, for all project activities occurring in the vicinity of elderberry shrubs. Measures 3.3.1a through 3.3.1c are intended to avoid and minimize the potential of project-related mortality of VELB. Although project-related loss of VELB habitat is a less-than-significant impact under CEQA, any project in the PPSA that removes elderberry shrubs will need to provide compensatory mitigation under the provisions of the USFWS incidental take authorization issued for the project(s). Measure 3.3.1d presents the compensatory mitigation scheme used by the USFWS.

> ***Mitigation Measure 3.3.1a (Avoidance).*** Prior to initiation of a given project within the PPSA, a survey for elderberry shrubs will be conducted by a qualified biologist, unless the entire project area is completely devoid of shrubby vegetation, in which case a elderberry survey is not necessary. If elderberry shrubs are identified during the survey, then they will be avoided. Typically, the USFWS considers a 100-foot disturbance-free buffer around elderberry shrubs complete avoidance. However, a buffer of as little as 20 feet may be arranged in consultation with the USFWS. The buffer will be clearly delineated with orange construction fencing with the appropriate signage posted. This

elderberry avoidance area will be clearly marked with signs, fencing, and/or flagging, and maintained for the duration of work in that area. No construction personnel or equipment shall enter the elderberry avoidance area, except for as provided under *Mitigation Measure 3.3.3b* below.

***Mitigation Measure 3.3.1b* (*Construction Monitoring*).** If project activities necessitate temporary entry into the elderberry avoidance area, approval will first be obtained from the USFWS and a qualified biologist will be on-site to monitor such activities for their duration within the avoidance area.

Mitigation Measure 3.3.1c (Employee Education Program). Prior to implementation of projects with elderberry shrubs on site, construction personnel will receive worker environmental awareness training in the identification of the VELB and its host plant.

Mitigation Measure 3.3.1d (Compensation). If it is not feasible to completely avoid all elderberry shrubs, then impacts to the shrubs will be mitigated in accordance with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999). This generally involves 1) conducting a protocol-level elderberry survey to assess the degree of "take" that will occur, 2) transplanting the shrubs to on-site or off-site lands protected in perpetuity under conservation easement ("conservation area"), or to a VELB mitigation bank, and 3) replacing each impacted stem with new elderberry plantings at a ratio of 1:1 to 1:8 (depending on stem diameter, presence of beetle exit holes, and habitat type) *or* purchasing an equivalent number of credits at a VELB mitigation bank.

Implementation of the above measures, as applicable, will reduce potential project impacts to the valley elderberry longhorn beetle to a less than significant level, and will ensure that future development activities within the PPSA remain in compliance with federal laws protecting this species.

3.3.2 Project-Related Mortality of San Joaquin Kit Fox

Potential Impacts. As discussed in Section 2.5.3, the San Joaquin kit fox is unlikely to occur within the PPSA. However, based on past occurrences of kit fox in the 10-mile vicinity of the

PPSA, it is remotely possible that individual foxes may pass through and possibly forage on the site from time to time during dispersal movements. If a kit fox were present at the time of future construction activities in the PPSA, then it would be at risk of project-related injury or mortality. Kit fox mortality as a result of future development of the PPSA would violate the state and federal Endangered Species Acts, and is considered a potentially significant impact under CEQA.

Mitigation. Prior to the construction of any projects within the PPSA, the following measures adapted from the U.S. Fish and Wildlife Service 2011 *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (Appendix E) will be implemented.

> ***Mitigation Measure 3.3.2a (Pre-construction Surveys).*** Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS *Standard Recommendations*. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately to determine the best course of action.
>
> ***Mitigation Measure 3.3.2b (Avoidance).*** Should a kit fox be found using any of the sites during preconstruction surveys, the project will avoid the habitat occupied by the kit fox and the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified.
>
> ***Mitigation Measure 3.3.2c (Minimization).*** Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g.,

pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.

Mitigation Measure 3.3.2d (Employee Education Program). Prior to the start of construction the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.

Mitigation Measure 3.3.2e (Mortality Reporting). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

Implementation of these measures will reduce potential impacts to the San Joaquin kit fox to a less than significant level and ensure that future development activities within the PPSA remain in compliance with state and federal laws protecting this species.

3.3.3 Project-Related Mortality of Burrowing Owl

Potential Impacts. As discussed in Section 2.5.4, burrowing owls have the potential to nest or roost in the dry-farmed wheat field and along the margins of Banks Ditch and Road 44 adjacent to that field and the corn field to the north. Although highly unlikely due to lack of nearby foraging habitat and high levels of human disturbance, burrowing owls could also conceivably use small mammal burrows located in and around the industrial complex and along road margins elsewhere in the PPSA. If one or more owls were present in these areas at the time of construction, then construction activities would have the potential to injure or kill these individuals. Mortality of individual burrowing owls would violate California Fish and Game

Code and the federal Migratory Bird Treaty Act, and is considered a significant impact of the project under CEQA.

Mitigation. Prior to the initiation of project-related activities involving ground disturbance or heavy equipment use on those portions of the PPSA that contain suitable burrowing owl habitat, the following measures will be implemented, adapted from the *Staff Report on Burrowing Owl Mitigation* (CDFG 1995 and 2012).

> ***Mitigation Measure 3.3.3a (Pre-construction Surveys).*** A pre-construction survey for burrowing owls will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. The survey area will include all suitable habitat on and within 500 feet of project impact areas, where accessible.
>
> ***Mitigation Measure 3.3.3b (Avoidance of Active Nests).*** If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located within or near project impact areas, a 250-foot construction setback will be established around active owl nests, or alternate avoidance measures implemented in consultation with CDFW. The buffer areas will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.
>
> ***Mitigation Measure 3.3.3c (Passive Relocation of Resident Owls).*** During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may be passively relocated to alternative habitat in accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50 foot buffer around all active burrowing owl burrows, 2) removing all suitable burrows outside the 50 foot buffer and up to 160 feet outside of the impact areas as necessary, 3) installing one-way

doors on all potential owl burrows within the 50 foot buffer, 4) leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50 foot buffer.

Implementation of the above measures will reduce potential project impacts to the burrowing owl to a less than significant level and ensure that the project is in compliance with state and federal laws protecting this species.

3.3.4 Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds

Potential Impacts. The majority of the PPSA consists of habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. Two special-status birds, the Swainson's hawk and loggerhead shrike, also have the potential to nest within the PPSA. Orchard trees of the PPSA could be used by mourning doves or American robins, while mature trees bordering the PPSA along the ruderal margin of Highway 99 could be used by the western kingbird, Bullock's and hooded orioles, and various raptors, including the Swainson's hawk. Killdeers may nest on bare ground or gravel surfaces in ruderal or industrial areas of the PPSA, and the house finch may nest in the PPSA's buildings. Cliff swallows could nest in the culverts at Road 44's crossing of Banks Ditch. Raptors and migratory birds nesting within the PPSA at the time that individual projects are implemented have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state and federal laws and are considered a potentially significant impact under CEQA.

Mitigation. The following measures will be implemented prior to the start of project activities within the PPSA.

> ***Mitigation Measure 3.3.4a* (*Avoidance*).** In order to avoid impacts to nesting raptors and migratory birds, individual projects within the PPSA will be constructed, where possible, outside the nesting season, or between September 1st and January 31st.

Mitigation Measure 3.3.4b (Preconstruction Surveys). If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

Mitigation Measure 3.3.4c (Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

Implementation of the above measures will reduce potential project impacts to nesting raptors and migratory birds to a less than significant level, and will ensure that the project remains in compliance with state and federal laws protecting these species.

3.3.5 Project-Related Mortality of Roosting Bats

Potential Impacts. Development of the PPSA may result in the removal of buildings and mature trees that provide potential roosting habitat for bats, including special status species such as the pallid bat and western mastiff bat. If trees or buildings removed by construction activities contain colonial roosts, many individual bats could be killed. Such a mortality event is considered a potentially significant impact of the project under CEQA.

Mitigation. The following measures will be implemented for construction activities involving the removal of buildings or mature trees.

Mitigation Measure 3.3.5a (Temporal Avoidance). To avoid potential impacts to maternity bat roosts, removal of buildings and trees should occur outside of the period

between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.

Mitigation Measure 3.3.5b (Preconstruction Surveys). If removal of buildings or trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to these activities, a qualified biologist will survey affected buildings and trees for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.

Mitigation Measure 3.3.5c (Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees or structures prior to full removal under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs as a result of construction activities.

Mitigation Measure 3.3.5d (Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist deems that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.

Implementation of the above measure will reduce impacts to roosting bats to a less than significant level under CEQA.

3.3.6 Project-Related Impacts to Waters of the United States

Potential Impacts. As discussed in Section 2.6, the hydrologic features on the PPSA include the 3,400 linear foot stretch of Banks Ditch and the 2,235 foot stretch of Traver Canal. Both would likely be considered jurisdictional by the USACE; however, the jurisdictional status of water features is determined by the USACE upon review and verification of a wetland delineation prepared for the project area. The project could result in potentially significant impacts to these

ditches, should future development within the planning area require filling large portions or all of the ditches. Project impacts to these ditches of 0.5 acre or more would be considered potentially significant. Impacts to waters of the U.S., regardless of the size of the impact, are also subject to the permit requirements of Section 404 and 401 of the Clean Water Act. The placement of fill within any wetlands or other jurisdictional features will require 1) a Clean Water Act permit from the USACE, and 2) a Water Quality Certification from the RWQCB. These permits cannot be issued without an accepted preliminary jurisdictional determination or a verified approved wetland delineation by the USACE.

Mitigation. The following measures will reduce impacts to jurisdictional waters to a less than significant level.

> ***Mitigation Measure 3.3.6a (Avoidance and/ or Minimization).*** Individual projects within the PPSA will be designed to avoid and/or minimize impacts to waters of the U.S. to the maximum extent practicable while still achieving its goal of expanding the planning area.
>
> ***Mitigation Measure 3.3.6b (Compliance with Terms of the Permits).*** If Banks Ditch or Traver Canal is determined to be a water of the U.S. by the USACE, then the applicant will be required to follow the permit requirements which may include an employee education program, implementation of Best Management Practices, placement of protective fencing between nearby unaffected waters and construction areas during construction, removal of temporary fills, and restoring temporarily disturbed areas to pre-project conditions, among others.
>
> ***Mitigation Measure 3.3.6c*** (***Compensatory Mitigation).*** If the ditches are determined to be waters of the U.S., then compensatory mitigation will be provided at a minimum of 1:1 for all losses of waters that exceed 0.5 acre. Compensatory mitigation will be provided in the form of either on-site or off site preservation or creation, through payment into an in-lieu fee program (if one is available), purchase of credits from an approved Mitigation Bank in the vicinity, or some combination of one or more of these options. Preserved and/or created waters would have to be placed under conservation

easement held by a third party and managed in perpetuity with an approved endowment fund. If losses are 0.5 acre or less, then impacts would be considered to be less than significant, and compensatory mitigation would not be necessary for purposes of CEQA.

Implementation of the above measures would reduce potential impacts to waters of the U.S. to a less-than-significant level and ensure that the project remains in compliance with state and federal laws protecting this resource.

3.4 LESS THAN SIGNIFICANT PROJECT IMPACTS

3.4.1 Loss of Habitat for Special Status Plants

Potential Impacts. Nine special status vascular plant species are known to occur in the vicinity of the project site: heartscale (*Atriplex cordulata* var. *cordulata*), Earlimart orache (*Atriplex cordulata* var. *erecticaulis*), brittlescale (*Atriplex depressa*), lesser saltscale (*Atriplex minuscula*), subtle orache (*Atriplex subtilis*), recurved larkspur (*Delphinium recurvatum*), spiny sepaled button-celery (*Eryngium spinosepalum*), San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), and San Joaquin adobe sunburst (*Pseudobahia peirsonii*) (see Table 1). Because of the many decades of agricultural and industrial/residential disturbance, habitat for these nine plant species is absent from orchards, agricultural fields, and industrial/residential areas of the PPSA. The ruderal margins of the agricultural and industrial areas are regularly disturbed by humans and would not support populations of any of these special status plant species. Furthermore, presence of any of these plants would have been detected during the April and June 2014 field surveys, if present. No special status plant species have been detected within a 4 mile radius of the site (see Figure 4). Therefore, the proposed project would not affect regional populations of these species and impacts would be less than significant.

Mitigation. Mitigation measures are not warranted.

3.4.2 Loss of Habitat for Special Status Animals Absent or Unlikely to Occur in the PPSA

Potential Impacts. Of the 15 special status animal species potentially occurring in the region, six species would be absent or unlikely to occur on within the PPSA (see Table 1). These

include the vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), California tiger salamander (*Ambystoma californiense*), San Joaquin kit fox, western spadefoot (*Spea hammondii*), and western pond turtle (*Actinemys marmorata*). Loss of habitat as a result of future development of the PPSA would have no effect on these species because there is little or no likelihood that they are present.

Mitigation. No mitigation is warranted.

3.4.3 Loss of Habitat for Special Status Animals that May Occur in the PPSA

Potential Impacts. Of the 15 special status animal species potentially occurring in the region, nine species have the potential to occur within the PPSA in association with breeding, foraging, or both. Species that could potentially breed and forage in the PPSA include the valley elderberry longhorn beetle, Swainson's hawk, loggerhead shrike (*Lanius ludovicianus*), burrowing owl, pallid bat (*Antrozous pallidus*), and western mastiff bat (*Eumops perotis* ssp. *californicus*). Species that could potentially forage in the PPSA, but would breed elsewhere, include the white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), and tricolored blackbird (*Agelaius tricolor*). The valley elderberry longhorn beetle has been considered previously (see Section 3.3.1) and is not readdressed in this section.

As summarized in Table 1, the mature eucalyptus trees bordering the western block of the PPSA along Highway 99 represent potential breeding habitat for the Swainson's hawk, loggerhead shrike, pallid bat, and western mastiff bat. The two bat species could also potentially breed in buildings of the PPSA's industrial/residential areas. Any loss of mature trees and buildings associated with future development of the PPSA would be unlikely to adversely affect populations of these species because 1) eucalyptus trees in the Highway 99 right-of-way and industrial/residential buildings are less than ideal for breeding by these bird and bat species due to high levels of surrounding human disturbance, 2) the PPSA contains relatively few such habitat features, approximately ten eucalyptus trees and eight industrial/residential structures, and 3) such features are abundant in the region.

The 50-acre corn field and 10-acre dry-farmed wheat field in the eastern block of the PPSA represent potential foraging habitat for all eight species considered in this section, and the dry-farmed wheat field could potentially serve as breeding habitat for the burrowing owl. The corn field would be considered marginal foraging habitat for these species due to intensive agricultural practices; moreover, for much of the year, vegetation height in this field would be incompatible with the foraging strategies of the six avian species. The dry-farmed wheat field experiences minimal disturbance, appears to support a sufficient prey base for the eight species in question, and contains California ground squirrel burrows suitable for secondary use by the burrowing owl. However, neither field provides regionally important habitat for the eight bird and bat species in question. Considerable agricultural habitat suitable for foraging will continue to be available on surrounding lands following development of the PPSA, and higher quality breeding habitat for the burrowing owl is available in grasslands of the region. Therefore, the loss of this 60-acre area is unlikely to adversely affect populations of these species.

Orchard land of the PPSA represents potential foraging habitat for the pallid bat. However, as with the other habitat types discussed in this section, orchard land is regionally abundant, and loss of approximately 215 acres of orchard associated with future development of the PPSA is unlikely to adversely affect pallid bat populations.

Mitigation. No mitigation is warranted.

3.4.4 Project Impacts to Wildlife Movement Corridors

Potential Impacts. The PPSA consists of and is surrounded by developed and/or highly disturbed lands that do not contain important movement corridors for native wildlife. Birds using the Pacific flyway will continue to do so following project development. Future development of the PPSA will result in a less than significant effect on regional wildlife movements.

Mitigation. No mitigation is warranted.

3.4.5 Disturbance to Riparian Habitat or other Sensitive Habitats

Potential Impacts. Riparian habitat is absent from the PPSA. The agricultural and disturbed lands that comprise the PPSA are not considered sensitive habitats, and are not of significant importance to regional wildlife populations. Because riparian and other sensitive habitats are absent, future development of the PPSA will have no impact on these habitats.

Mitigation. Mitigations are not warranted.

3.4.6 Project Impacts to Designated Critical Habitat

Potential Impacts. As discussed, designated critical habitat is absent from the PPSA. The nearest units of critical habitat are located approximately 1 to 3 miles south and southeast of the PPSA along Cross Creek. Future development of the PPSA does not have the potential to impact these units of critical habitat.

Mitigation. No mitigation is warranted.

3.4.7 Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters

Potential Impacts. Extensive grading often leaves the soils of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Furthermore, runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc. However, agricultural and industrial/residential lands in and around the PPSA are nearly level and are subjected to regular soil disturbance that exposes barren soils. The only hydrologic features found in the immediate vicinity of the PPSA where grading could occur (Banks Ditch and Traver Canal) are highly maintained and were dry during the springtime field surveys. Only during an extremely large rainfall event could eroded soil conceivably travel downstream to Cross Creek or Kings River. Therefore, impacts to water quality from project construction are considered less than significant.

It should be noted that projects involving the grading of more than one acre of land must be in compliance with provisions of a General Construction permit (a type of NPDES permit) available from the RWQCB.

Mitigation. No mitigations are warranted.

3.4.8 Local Policies or Habitat Conservation Plans

Potential Impacts. The projects will be implemented in accordance with the goals and policies of the Tulare County General Plan. No known HCPs or NCCPs are in effect for the area. Therefore, the projects are not expected to conflict with local policies or habitat conservation plans.

Mitigation. No mitigation is warranted.

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APPENDIX A: VASCULAR PLANTS OF THE PPSA

APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

The vascular plant species listed below were observed on the project site during a site survey conducted by Live Oak Associates, Inc. on April 16 and June 26, 2014. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland
NR - No review
NA - No agreement
NI - No investigation

ASTERACEAE – Sunflower Family		
Erigeron bonariensis	Flax-leaved Horseweed	UPL
Conyza canadensis	Canadian Horseweed	FAC
Helianthus annuus	Common Sunflower	FACU
Lactuca serriola	Prickly Lettuce	FAC
Xanthium strumarium	Common Cocklebur	FAC+
ADOXACEAE- Elderberry Family		
Sambucus nigra ssp. *caerulea*	Blue Elderberry	FAC
BORAGINACEAE – Borage Family		
Amsinckia intermedia	Rancher's Fireweed	UPL
CHENOPODIACEAE – Goosefoot Family		
Chenopodium album	Common Lambsquarters	FACU
Salsola tragus	Russian Thistle	FACU
CYPERACEAE – Umbrella Sedge Family		
Cyperus eragrostis	Tall Flatsedge	FACW
MALVACEAE – Mallow Family		
Malva nicaeensis	Bull Mallow	UPL
MYRTACEAE – Myrtle Family		
Eucalyptus globulus	Blue Gum Eucalyptus	UPL
ONAGRACEAE – Fuschia Family		
Epilobium brachycarpum	Willow Herb	UPL
PALMAE – Palm Family		
Washingtonia filifera	Washington Fan Palm	FACW
POACEAE – Grass Family		
Avena fatua	Wild Oats	UPL
Bromus diandrus	Ripgut Brome	UPL
Cynodon dactylon	Bermuda Grass	FAC
Hordeum murinum ssp. *leporinum*	Barnyard Barley	FACU
Leptochloa fusca ssp. *fascicularis*	Bearded Sprangletop	FACW
Triticum sp.	Cultivated Wheat	UPL

Zea mayz ssp. *mayz*	Cultivated Corn	UPL
ROSACEAE – Rose Family		
Prunus avium	Cultivated Cherry	UPL
Prunus dulcis	Cultivated Almond	UPL
Prunus persica	Cultivated Peach	UPL
Prunus persica var. *nectarine*	Cultivated Nectarine	UPL
SOLANACEAE – Potato Family		
Datura stramineum	Jimson Weed	UPL
Nicotiana glauca	Tree Tobacco	FAC
TAMARICACEAE – Tamarix Family		
Tamarix parviflora	Small Flower Tamarisk	FAC
ZYGOPHYLLACEAE – Bean and Caltrop Family		
Tribulus terrestris	Puncturevine	UPL

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PPSA

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PPSA

The species listed below are those that may reasonably be expected to use the habitats of the PPSA routinely or from time to time. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed in or adjacent to the PPSA on April 16 and June 26, 2014 have been noted with an asterisk.

CLASS: AMPHIBIA (Amphibians)
ORDER: SALIENTIA (Frogs and Toads)
FAMILY: BUFONIDAE (True Toads)
Western Toad (*Bufo boreas*)
FAMILY: HYLIDAE (Treefrogs and relatives)
Pacific Chorus Frog (*Pseudacris regilla*)
FAMILY: RANIDAE (True Frogs)
Bullfrog (*Lithobates catesbeiana*)

CLASS: REPTILIA (Reptiles)
ORDER: SQUAMATA (Lizards and Snakes)
SUBORDER: SAURIA (Lizards)
FAMILY: PHRYNOSOMATIDAE
Western Fence Lizard (*Sceloporus occidentalis*)
*Side-blotched Lizard (*Uta stansburiana*)
FAMILY: TEIIDAE (Whiptails and relatives)
Western Whiptail (*Cnemidophorus tigris*)
SUBORDER: SERPENTES (Snakes)
FAMILY: COLUBRIDAE (Colubrids)
Glossy Snake (*Arizona elegans*)
Gopher Snake (*Pituophis melanoleucus*)
Common Kingsnake (*Lampropeltis getulus*)
Long-nosed Snake (*Rhinocheilus lecontei*)
Common Garter Snake (*Thamnophis sirtalis*)
FAMILY: VIPERIDAE (Vipers)
Western Rattlesnake (*Crotalus viridis*)

CLASS: AVES (Birds)
ORDER: CICONIIFORMES (Herons, Storks, Ibises and Relatives)
FAMILY: ARDEIDAE (Herons and Bitterns)
Great Blue Heron (*Ardea herodias*)
Cattle Egret (*Bubulcus ibis*)
Great Egret (*Ardea alba*)
Snowy Egret (*Egretta thula*)
FAMILY: CATHARTIDAE (American Vultures)
Turkey Vulture (*Cathartes aura*)
ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)

FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)
White-tailed Kite (*Elanus leucurus*)
Northern Harrier (*Circus cyaneus*)
*Red-tailed Hawk (*Buteo jamaicensis*)
Ferruginous Hawk (*Buteo regalis*)
Sharp-Shinned Hawk (*Accipiter striatus*)
Cooper's Hawk (*Accipiter cooperii*)
Swainson's Hawk (*Buteo swainsoni*)
FAMILY: FALCONIDAE (Caracaras and Falcons)
*American Kestrel (*Falco sparverius*)
ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and relatives)
FAMILY: CHARADRIIDAE (Plovers and relatives)
*****Killdeer (*Charadrius vociferus*)
ORDER: COLUMBIFORMES (Pigeons and Doves)
FAMILY: COLUMBIDAE (Pigeons and Doves)
Rock Pigeon (*Columba livia*)
*Mourning Dove (*Zenaida macroura*)
*Eurasian Collared-Dove (*Streptopelia decaocto*)
ORDER: STRIGIFORMES (Owls)
FAMILY: TYTONIDAE (Barn Owls)
Barn Owl (*Tyto alba*)
FAMILY: STRIGIDAE (Typical Owls)
Burrowing Owl (*Athene cunicularia*)
Great Horned Owl (*Bubo virginianus*)
Western Screech Owl (*Otus kennicottii*)
ORDER: APODIFORMES (Swifts and Hummingbirds)
FAMILY: TROCHILIDAE (Hummingbirds)
*Black-chinned Hummingbird (*Archilochus alexandri*)
Anna's Hummingbird (*Calypte anna*)
Rufous Hummingbird (*Selasphorus rufus*)
ORDER: PICIFORMES (Woodpeckers and relatives)
FAMILY: PICIDAE (Woodpecker and Wrynecks)
Northern Flicker (*Colaptes chrysoides*)
ORDER: PASSERIFORMES (Perching Birds)
FAMILY: TYRANNIDAE (Tyrant Flycatchers)
Black Phoebe (*Sayornis nigricans*)
Say's Phoebe (*Sayornis saya*)
*Western Kingbird (*Tyrannus verticalis*)
FAMILY: LANIIDAE (Shrikes)
Loggerhead Shrike (*Lanius ludovicianus*)
FAMILY: CORVIDAE (Jays, Magpies, and Crows)
Western Scrub Jay (*Aphelocoma coerulescens*)
*American Crow (*Corvus brachyrhynchos*)
Common Raven (*Corvus corax*)
FAMILY: ALAUDIDAE (Larks)
Horned Lark (*Eremophila alpestris*)

FAMILY: HIRUNDINIDAE (Swallows)
Cliff Swallow (*Hirundo pyrrhonota*)
Barn Swallow (*Hirundo rustica*)
FAMILY: TURDIDAE
*American Robin (*Turdus migratorius*)
FAMILY: MIMIDAE (Mockingbirds and Thrashers)
*Northern Mockingbird (*Mimus polyglottos*)
FAMILY: STURNIDAE (Starlings)
*European Starling (*Sturnus vulgaris*)
FAMILY: MOTACILLIDAE (Wagtails and Pipits)
American Pipit (*Anthus rubescens*)
FAMILY: BOMBYCILLIDAE (Waxwings)
Cedar Waxwing (*Bombycilla cedrorum*)
FAMILY: PARULIDAE (Wood Warblers and Relatives)
Yellow-rumped Warbler (*Dendroica coronata*)
FAMILY: EMBERIZIDAE (Sparrows and Relatives)
Savannah Sparrow (*Passerculus sandwichensis*)
White-crowned Sparrow (*Zonotrichia leucophrys*)
FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)
*Red-winged Blackbird (*Agelaius phoeniceus*)
Tricolored Black Bird (*Agelaius tricolor*)
Western Meadowlark (*Sturnella neglecta*)
Brewer's Blackbird (*Euphagus cyanocephalus*)
Brown-headed Cowbird (*Molothrus ater*)
Bullock's Oriole (*Icterus bullockii*)
Hooded Oriole (*Icterus cucullatus*)
FAMILY: FRINGILLIDAE (Finches)
*House Finch (*Carpodacus mexicanus*)
Lesser Goldfinch (*Carduelis psaltria*)
FAMILY: PASSERIDAE (Old World Sparrows)
*House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA (Mammals)
ORDER: DIDELPHIMORPHIA (Marsupials)
FAMILY: DIDELPHIDAE (Opossums)
Virginia Opossum (*Didelphis virginiana*)
ORDER: CHIROPTERA (Bats)
FAMILY: PHYLLOSTOMIDAE (Leaf-nosed Bats)
Southern Long-nosed Bat (*Leptonycteris curasoae*)
FAMILY: VESPERTILIONIDAE (Evening Bats)
Yuma Myotis (*Myotis yumanensis*)
California Myotis (*Myotis californicus*)
Pale Big-eared Bat (*Corynorhinus townsendii pallescens*)
Western Pipistrelle (*Pipistrellus hesperus*)
Big Brown Bat (*Eptesicus fuscus*)
Pallid Bat (*Antrozous pallidus*)

FAMILY: MOLOSSIDAE (Free-tailed Bat)
Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)
Brazilian Free-tailed Bat (*Tadarida brasiliensis*)

ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)

FAMILY: LEPORIDAE (Rabbits and Hares)
Audobon's Cottontail (*Sylvilagus audubonii*)
Black-tailed (Hare) Jackrabbit (*Lepus californicus*)

ORDER: RODENTIA (Rodents)

FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)
*California Ground Squirrel (*Spermophilus beecheyi*)

FAMILY: GEOMYIDAE (Pocket Gophers)
*Botta's Pocket Gopher (*Thomomys bottae*)

FAMILY: MURIDAE (Old World Rats and Mice)
Western Harvest Mouse (*Reithrodontomys megalotis*)
Deer Mouse (*Peromyscus maniculatus*)
Norway Rat (*Rattus norvegicus*)
House Mouse (*Mus musculus*)
California Vole (*Microtus californicus*)

ORDER: CARNIVORA (Carnivores)

FAMILY: CANIDAE (Foxes, Wolves, and relatives)
Coyote (*Canis latrans*)
Red Fox (*Vulpes vulpes*)

FAMILY: PROCYONIDAE (Raccoons and relatives)
Raccoon (*Procyon lotor*)

FAMILY: MEPHITIDAE (Skunks)
Striped Skunk (*Mephitis mephitis*)

FAMILY: FELIDAE (Cats)
Bobcat (*Lynx rufus*)
Feral Cat (*Felis domesticus*)

APPENDIX C: SELECTED PHOTOGRAPHS OF THE PPSA

Photograph #1 (above). Orchards consisting of almond, nectarine, plum, peach and cherry dominated the northern portions of the PPSA. **Photograph #2 (below).** A highly-maintained corn field was found in the center of the railroad yard in the eastern block of the PPSA.

Photograph #3. Banks Ditch along the eastern boundary of the eastern block of the PPSA. **Photograph #4.** Traver Canal along the northern boundary of the northern block of the PPSA with the orchard habitat of the northern block in the background.

Photograph #5 (above). A dry-farmed wheat field in the eastern block of the PPSA contained many California ground squirrel burrows. **Photograph #6 (below).** Burrows of various sizes were found in ruderal areas of the PPSA.

Photograph #7 (above). Three blue elderberry shrubs were found in the ruderal area near the Foster Farms processing plant found immediately south of Avenue 360 and east of Highway 99. **Photograph #8 (below).** A few large Eucalyptus trees provide suitable nesting habitat for a number of avian species, including the Swainson's hawk and loggerhead shrike.

APPENDIX D: U.S. FISH AND WILDLIFE SERVICE CONSERVATION GUIDELINES FOR THE VALLEY ELDERBERRY LONGHORN BEETLE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

Conservation Guidelines for the
Valley Elderberry Longhorn Beetle
9 July 1999

The following guidelines have been issued by the U.S. Fish and Wildlife Service (Service) to assist Federal agencies and non-federal project applicants needing incidental take authorization through a section 7 consultation or a section 10(a)(1)(B) permit in developing measures to avoid and minimize adverse effects on the valley elderberry longhorn beetle. The Service will revise these guidelines as needed in the future. The most recently issued version of these guidelines should be used in developing all projects and habitat restoration plans. The survey and monitoring procedures described below are designed to avoid any adverse effects to the valley elderberry longhorn beetle. Thus a recovery permit is not needed to survey for the beetle or its habitat or to monitor conservation areas. If you are interested in a recovery permit for research purposes please call the Service's Regional Office at (503) 231-2063.

Background Information

The valley elderberry longhorn beetle (Desmocerus californicus dimorphus), was listed as a threatened species on August 8, 1980 (Federal Register 45: 52803-52807). This animal is fully protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). The valley elderberry longhorn beetle (beetle) is completely dependent on its host plant, elderberry (Sambucus species), which is a common component of the remaining riparian forests and adjacent upland habitats of California's Central Valley. Use of the elderberry by the beetle, a wood borer, is rarely apparent. Frequently, the only exterior evidence of the elderberry's use by the beetle is an exit hole created by the larva just prior to the pupal stage. The life cycle takes one or two years to complete. The animal spends most of its life in the larval stage, living within the stems of an elderberry plant. Adult emergence is from late March through June, about the same time the elderberry produces flowers. The adult stage is short-lived. Further information on the life history, ecology, behavior, and distribution of the beetle can be found in a report by Barr (1991) and the recovery plan for the beetle (USFWS 1984).

Surveys

Proposed project sites within the range of the valley elderberry longhorn beetle should be surveyed for the presence of the beetle and its elderberry host plant by a qualified biologist. The beetle's range extends throughout California's Central Valley and associated foothills from about the 3,000-foot elevation contour on the east and the watershed of the Central Valley on the west (Figure 1). All or portions of 31 counties are included: Alameda, Amador, Butte, Calaveras, Colusa, Contra Costa, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Madera, Mariposa, Merced, Napa, Nevada, Placer, Sacramento, San Benito, San Joaquin, San Luis Obispo, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba.

If elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level occur on or adjacent to the proposed project site, or are otherwise located where they may be directly or indirectly affected by the proposed action, minimization measures which include planting replacement habitat (conservation planting) are required (Table 1).

All elderberry shrubs with one or more stems measuring 1.0 inch or greater in diameter at ground level that occur on or adjacent to a proposed project site must be thoroughly searched for beetle exit holes (external evidence of beetle presence). In addition, all elderberry stems one inch or greater in diameter at ground level must be tallied by diameter size class (Table 1). As outlined in Table 1, the numbers of elderberry seedlings/cuttings and associated riparian native trees/shrubs to be planted as replacement habitat are determined by stem size class of affected elderberry shrubs, presence or absence of exit holes, and whether a proposed project lies in a riparian or non-riparian area.

Elderberry plants with no stems measuring 1.0 inch or greater in diameter at ground level are unlikely to be habitat for the beetle because of their small size and/or immaturity. Therefore, no minimization measures are required for removal of elderberry plants with no stems measuring 1.0 inch or greater in diameter at ground level with no exit holes. Surveys are valid for a period of two years.

Avoid and Protect Habitat Whenever Possible

Project sites that do not contain beetle habitat are preferred. If suitable habitat for the beetle occurs on the project site, or within close proximity where beetles will be affected by the project, these areas must be designated as avoidance areas and must be protected from disturbance during the construction and operation of the project. When possible, projects should be designed such that avoidance areas are connected with adjacent habitat to prevent fragmentation and isolation of beetle populations. Any beetle habitat that cannot be avoided as described below should be considered impacted and appropriate minimization measures should be proposed as described below.

Avoidance: Establishment and Maintenance of a Buffer Zone

Complete avoidance (i.e., no adverse effects) may be assumed when a 100-foot (or wider) buffer is established and maintained around elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level. Firebreaks may not be included in the buffer zone. In buffer areas construction-related disturbance should be minimized, and any damaged area should be promptly restored following construction. The Service must be consulted before any disturbances within the buffer area are considered. In addition, the Service must be provided with a map identifying the avoidance area and written details describing avoidance measures.

Protective Measures

1. Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the Service, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.

2. Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.

3. Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.

4. Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.

Restoration and Maintenance

1. Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and re-vegetate with appropriate native plants.

2. Buffer areas must continue to be protected after construction from adverse effects of the project. Measures such as fencing, signs, weeding, and trash removal are usually appropriate.

3. No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.

4. The applicant must provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed.

5. Mowing of grasses/ground cover may occur from July through April to reduce fire hazard. No mowing should occur within five (5) feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment).

Transplant Elderberry Plants That Cannot Be Avoided

Elderberry plants must be transplanted if they can not be avoided by the proposed project. All elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level must be transplanted to a conservation area (see below). At the Service's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible the minimization ratios in Table 1 may be increased to offset the additional habitat loss.

Trimming of elderberry plants (e.g., pruning along roadways, bike paths, or trails) with one or more stems 1.0 inch or greater in diameter at ground level, may result in take of beetles. Therefore, trimming is subject to appropriate minimization measures as outlined in Table 1.

1. Monitor. A qualified biologist (monitor) must be on-site for the duration of the transplanting of the elderberry plants to insure that no unauthorized take of the valley elderberry longhorn beetle occurs. If unauthorized take occurs, the monitor must have the authority to stop work until corrective measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the Service and to the California Department of Fish and Game.

2. Timing. Transplant elderberry plants when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success.

3. Transplanting Procedure.

    a. Cut the plant back 3 to 6 feet from the ground or to 50 percent of its height (whichever is taller) by removing branches and stems above this height. The trunk and all stems measuring 1.0 inch or greater in diameter at ground level should be replanted. Any leaves remaining on the plant should be removed.

b. Excavate a hole of adequate size to receive the transplant.

c. Excavate the plant using a Vemeer spade, backhoe, front end loader, or other suitable equipment, taking as much of the root ball as possible, and replant immediately at the conservation area. Move the plant only by the root ball. If the plant is to be moved and transplanted off site, secure the root ball with wire and wrap it with burlap. Dampen the burlap with water, as necessary, to keep the root ball wet. Do not let the roots dry out. Care should be taken to ensure that the soil is not dislodged from around the roots of the transplant. If the site receiving the transplant does not have adequate soil moisture, pre-wet the soil a day or two before transplantation.

d. The planting area must be at least 1,800 square feet for each elderberry transplant. The root ball should be planted so that its top is level with the existing ground. Compact the soil sufficiently so that settlement does not occur. As many as five (5) additional elderberry plantings (cuttings or seedlings) and up to five (5) associated native species plantings (see below) may also be planted within the 1,800 square foot area with the transplant. The transplant and each new planting should have its own watering basin measuring at least three (3) feet in diameter. Watering basins should have a continuous berm measuring approximately eight (8) inches wide at the base and six (6) inches high.

e. Saturate the soil with water. Do not use fertilizers or other supplements or paint the tips of stems with pruning substances, as the effects of these compounds on the beetle are unknown.

f. Monitor to ascertain if additional watering is necessary. If the soil is sandy and well-drained, plants may need to be watered weekly or twice monthly. If the soil is clayey and poorly-drained, it may not be necessary to water after the initial saturation. However, most transplants require watering through the first summer. A drip watering system and timer is ideal. However, in situations where this is not possible, a water truck or other apparatus may be used.

Plant Additional Seedlings or Cuttings

Each elderberry stem measuring 1.0 inch or greater in diameter at ground level that is adversely affected (i.e., transplanted or destroyed) must be replaced, in the conservation area, with elderberry seedlings or cuttings at a ratio ranging from 1:1 to 8:1 (new plantings to affected stems). Minimization ratios are listed and explained in Table 1. Stock of either seedlings or cuttings should be obtained from local sources. Cuttings may be obtained from the plants to be transplanted if the project site is in the vicinity of the conservation area. If the Service determines that the elderberry plants on the proposed project site are unsuitable candidates for

transplanting, the Service may allow the applicant to plant seedlings or cuttings at higher than the stated ratios in Table 1 for each elderberry plant that cannot be transplanted.

Plant Associated Native Species

Studies have found that the beetle is more abundant in dense native plant communities with a mature overstory and a mixed understory. Therefore, a mix of native plants associated with the elderberry plants at the project site or similar sites will be planted at ratios ranging from 1:1 to 2:1 [native tree/plant species to each elderberry seedling or cutting (see Table 1)]. These native plantings must be monitored with the same survival criteria used for the elderberry seedlings (see below). Stock of saplings, cuttings, and seedlings should be obtained from local sources. If the parent stock is obtained from a distance greater than one mile from the conservation area, approval by the Service of the native plant donor sites must be obtained prior to initiation of the revegetation work. Planting or seeding the conservation area with native herbaceous species is encouraged. Establishing native grasses and forbs may discourage unwanted non-native species from becoming established or persisting at the conservation area. Only stock from local sources should be used.

Examples

Example 1

The project will adversely affect beetle habitat on a vacant lot on the land side of a river levee. This levee now separates beetle habitat on the vacant lot from extant Great Valley Mixed Riparian Forest (Holland 1986) adjacent to the river. However, it is clear that the beetle habitat located on the vacant lot was part of a more extensive mixed riparian forest ecosystem extending farther from the river's edge prior to agricultural development and levee construction. Therefore, the beetle habitat on site is considered riparian. A total of two elderberry plants with at least one stem measuring 1.0 inch or greater in diameter at ground level will be affected by the proposed action. The two plants have a total of 15 stems measuring over 1.0 inch. No exit holes were found on either plant. Ten of the stems are between 1.0 and 3.0 inches in diameter and five of the stems are greater than 5.0 inches in diameter. The conservation area is suited for riparian forest habitat. Associated natives adjacent to the conservation area are box elder (Acer negundo californica), walnut (Juglans californica var. hindsii), sycamore (Platanus racemosa), cottonwood (Populus fremontii), willow (Salix gooddingii and S. laevigata), white alder (Alnus rhombifolia), ash (Fraxinus latifolia), button willow (Cephalanthus occidentalis), and wild grape (Vitis californica).

Minimization (based on ratios in Table 1):

• Transplant the two elderberry plants that will be affected to the conservation area.

• Plant 40 elderberry rooted cuttings (10 affected stems compensated at 2:1 ratio and 5 affected stems compensated at 4:1 ratio, cuttings planted:stems affected)

• Plant 40 associated native species (ratio of associated natives to elderberry plantings is 1:1 in areas with no exit holes):

5 saplings each of box elder, sycamore, and cottonwood
5 willow seedlings
5 white alder seedlings
5 saplings each of walnut and ash
3 California button willow
2 wild grape vines
Total: 40 associated native species

• Total area required is a minimum of 1,800 sq. ft. for one to five elderberry seedlings and up to 5 associated natives. Since, a total of 80 plants must be planted (40 elderberries and 40 associated natives), a total of 0.33 acre (14,400 square feet) will be required for conservation plantings. The conservation area will be seeded and planted with native grasses and forbs, and closely monitored and maintained throughout the monitoring period.

Example 2
The project will adversely affect beetle habitat in Blue Oak Woodland (Holland 1986). One elderberry plant with at least one stem measuring 1.0 inch or greater in diameter at ground level will be affected by the proposed action. The plant has a total of 10 stems measuring over 1.0 inch. Exit holes were found on the plant. Five of the stems are between 1.0 and 3.0 inches in diameter and five of the stems are between 3.0 and 5.0 inches in diameter. The conservation area is suited for elderberry savanna (non-riparian habitat). Associated natives adjacent to the conservation area are willow (Salix species), blue oak (Quercus douglasii), interior live oak (Q. wislizenii), sycamore, poison oak (Toxicodendron diversilobum), and wild grape.

Minimization (based on ratios in Table 1):

• Transplant the one elderberry plant that will be affected to the conservation area.

• Plant 30 elderberry seedlings (5 affected stems compensated at 2:1 ratio and 5 affected stems compensated at 4:1 ratio, cuttings planted:stems affected)

• Plant 60 associated native species (ratio of associated natives to elderberry plantings is 2:1 in areas with exit holes):

20 saplings of blue oak, 20 saplings of sycamore, and 20 saplings of willow, and seed and plant with a mixture of native grasses and forbs

• Total area required is a minimum of 1,800 sq. ft. for one to five elderberry seedlings and up to 5 associated natives. Since, a total of 90 plants must be planted (30 elderberries and 60 associated natives), a total of 0.37 acre (16,200 square feet) will be required for conservation plantings. The conservation area will be seeded and planted with native grasses and forbs, and closely monitored and maintained throughout the monitoring period.

Conservation Area—Provide Habitat for the Beetle in Perpetuity

The conservation area is distinct from the avoidance area (though the two may adjoin), and serves to receive and protect the transplanted elderberry plants and the elderberry and other native plantings. The Service may accept proposals for off-site conservation areas where appropriate.

1. Size. The conservation area must provide at least 1,800 square feet for each transplanted elderberry plant. As many as 10 conservation plantings (i.e., elderberry cuttings or seedlings and/or associated native plants) may be planted within the 1800 square foot area with each transplanted elderberry. An additional 1,800 square feet shall be provided for every additional 10 conservation plants. Each planting should have its own watering basin measuring approximately three feet in diameter. Watering basins should be constructed with a continuous berm measuring approximately eight inches wide at the base and six inches high.

   The planting density specified above is primarily for riparian forest habitats or other habitats with naturally dense cover. If the conservation area is an open habitat (i.e., elderberry savanna, oak woodland) more area may be needed for the required plantings. Contact the Service for assistance if the above planting recommendations are not appropriate for the proposed conservation area.

   No area to be maintained as a firebreak may be counted as conservation area. Like the avoidance area, the conservation area should connect with adjacent habitat wherever possible, to prevent isolation of beetle populations.

   Depending on adjacent land use, a buffer area may also be needed between the conservation area and the adjacent lands. For example, herbicides and pesticides are

often used on orchards or vineyards. These chemicals may drift or runoff onto the conservation area if an adequate buffer area is not provided.

2. Long-Term Protection. The conservation area must be protected in perpetuity as habitat for the valley elderberry longhorn beetle. A conservation easement or deed restrictions to protect the conservation area must be arranged. Conservation areas may be transferred to a resource agency or appropriate private organization for long-term management. The Service must be provided with a map and written details identifying the conservation area; and the applicant must receive approval from the Service that the conservation area is acceptable prior to initiating the conservation program. A true, recorded copy of the deed transfer, conservation easement, or deed restrictions protecting the conservation area in perpetuity must be provided to the Service before project implementation.

   Adequate funds must be provided to ensure that the conservation area is managed in perpetuity. The applicant must dedicate an endowment fund for this purpose, and designate the party or entity that will be responsible for long-term management of the conservation area. The Service must be provided with written documentation that funding and management of the conservation area (items 3-8 above) will be provided in perpetuity.

3. Weed Control. Weeds and other plants that are not native to the conservation area must be removed at least once a year, or at the discretion of the Service and the California Department of Fish and Game. Mechanical means should be used; herbicides are prohibited unless approved by the Service.

4. Pesticide and Toxicant Control. Measures must be taken to insure that no pesticides, herbicides, fertilizers, or other chemical agents enter the conservation area. No spraying of these agents must be done within one 100 feet of the area, or if they have the potential to drift, flow, or be washed into the area in the opinion of biologists or law enforcement personnel from the Service or the California Department of Fish and Game.

5. Litter Control. No dumping of trash or other material may occur within the conservation area. Any trash or other foreign material found deposited within the conservation area must be removed within 10 working days of discovery.

6. Fencing. Permanent fencing must be placed completely around the conservation area to prevent unauthorized entry by off-road vehicles, equestrians, and other parties that might damage or destroy the habitat of the beetle, unless approved by the Service. The applicant must receive written approval from the Service that the fencing is acceptable prior to initiation of the conservation program. The fence must be maintained in perpetuity, and must be repaired/replaced within 10 working days if it is found to be damaged. Some conservation areas may be made available to the public for appropriate recreational and educational opportunities with written approval from the Service. In

these cases appropriate fencing and signs informing the public of the beetle's threatened status and its natural history and ecology should be used and maintained in perpetuity.

7. Signs. A minimum of two prominent signs must be placed and maintained in perpetuity at the conservation area, unless otherwise approved by the Service. The signs should note that the site is habitat of the federally threatened valley elderberry longhorn beetle and, if appropriate, include information on the beetle's natural history and ecology. The signs must be approved by the Service. The signs must be repaired or replaced within 10 working days if they are found to be damaged or destroyed.

Monitoring

The population of valley elderberry longhorn beetles, the general condition of the conservation area, and the condition of the elderberry and associated native plantings in the conservation area must be monitored over a period of either ten (10) consecutive years or for seven (7) years over a 15-year period. The applicant may elect either 10 years of monitoring, with surveys and reports every year; or 15 years of monitoring, with surveys and reports on years 1, 2, 3, 5, 7, 10, and 15. The conservation plan provided by the applicant must state which monitoring schedule will be followed. No change in monitoring schedule will be accepted after the project is initiated. If conservation planting is done in stages (i.e., not all planting is implemented in the same time period), each stage of conservation planting will have a different start date for the required monitoring time.

Surveys. In any survey year, a minimum of two site visits between February 14 and June 30 of each year must be made by a qualified biologist. Surveys must include:

1. A population census of the adult beetles, including the number of beetles observed, their condition, behavior, and their precise locations. Visual counts must be used; mark-recapture or other methods involving handling or harassment must not be used.

2. A census of beetle exit holes in elderberry stems, noting their precise locations and estimated ages.

3. An evaluation of the elderberry plants and associated native plants on the site, and on the conservation area, if disjunct, including the number of plants, their size and condition.

4. An evaluation of the adequacy of the fencing, signs, and weed control efforts in the avoidance and conservation areas.

5. A general assessment of the habitat, including any real or potential threats to the beetle and its host plants, such as erosion, fire, excessive grazing, off-road vehicle use, vandalism, excessive weed growth, etc.

The materials and methods to be used in the monitoring studies must be reviewed and approved by the Service. All appropriate Federal permits must be obtained prior to initiating the field studies.

Reports. A written report, presenting and analyzing the data from the project monitoring, must be prepared by a qualified biologist in each of the years in which a monitoring survey is required. Copies of the report must be submitted by December 31 of the same year to the Service (Chief of Endangered Species, Sacramento Fish and Wildlife Office), and the Department of Fish and Game (Supervisor, Environmental Services, Department of Fish and Game, 1416 Ninth Street, Sacramento, California 95814; and Staff Zoologist, California Natural Diversity Data Base, Department of Fish and Game, 1220 S Street, Sacramento, California 95814). The report must explicitly address the status and progress of the transplanted and planted elderberry and associated native plants and trees, as well as any failings of the conservation plan and the steps taken to correct them. Any observations of beetles or fresh exit holes must be noted. Copies of original field notes, raw data, and photographs of the conservation area must be included with the report. A vicinity map of the site and maps showing where the individual adult beetles and exit holes were observed must be included. For the elderberry and associated native plants, the survival rate, condition, and size of the plants must be analyzed. Real and likely future threats must be addressed along with suggested remedies and preventative measures (e.g. limiting public access, more frequent removal of invasive non-native vegetation, etc.).

A copy of each monitoring report, along with the original field notes, photographs, correspondence, and all other pertinent material, should be deposited at the California Academy of Sciences (Librarian, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118) by December 31 of the year that monitoring is done and the report is prepared. The Service's Sacramento Fish and Wildlife Office should be provided with a copy of the receipt from the Academy library acknowledging receipt of the material, or the library catalog number assigned to it.

Access. Biologists and law enforcement personnel from the California Department of Fish and Game and the Service must be given complete access to the project site to monitor transplanting activities. Personnel from both these agencies must be given complete access to the project and the conservation area to monitor the beetle and its habitat in perpetuity.

Success Criteria

A minimum survival rate of at least 60 percent of the elderberry plants and 60 percent of the associated native plants must be maintained throughout the monitoring period. Within one year of discovery that survival has dropped below 60 percent, the applicant must replace failed plantings to bring survival above this level. The Service will make any determination as to the

applicant's replacement responsibilities arising from circumstances beyond its control, such as plants damaged or killed as a result of severe flooding or vandalism.

Service Contact

These guidelines were prepared by the Endangered Species Division of the Service's Sacramento Fish and Wildlife Office. If you have questions regarding these guidelines or to request a copy of the most recent guidelines, telephone (916) 414-6600, or write to:

U.S. Fish and Wildlife Service
Ecological Services
2800 Cottage Way, W-2605
Sacramento, CA 95825

Figure 1: Range of the Valley Elderberry Longhorn Beetle

Literature Cited

Barr, C. B. 1991. The distribution, habitat, and status of the valley elderberry longhorn beetle Desmocerus californicus dimorphus. U.S. Fish and Wildlife Service; Sacramento, California.

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Unpublished Report. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California.

USFWS. 1980. Listing the valley elderberry longhorn beetle as a threatened species with critical habitat. Federal Register 45:52803-52807.

USFWS. 1984. Recovery plan for the valley elderberry longhorn beetle. U.S. Fish and Wildlife Service, Endangered Species Program; Portland, Oregon.

Table 1: Minimization ratios based on location (riparian vs. non-riparian), stem diameter of affected elderberry plants at ground level, and presence or absence of exit holes.

Location	Stems (maximum diameter at ground level)	Exit Holes on Shrub Y/N (quantify)[1]	Elderberry Seedling Ratio[2]	Associated Native Plant Ratio[3]
non-riparian	stems > = 1" & = < 3"	No:	1:1	1:1
		Yes:	2:1	2:1
non-riparian	stems > 3" & < 5"	No:	2:1	1:1
		Yes:	4:1	2:1
non-riparian	stems >= 5"	No:	3:1	1:1
		Yes:	6:1	2:1
riparian	stems > = 1" & = < 3"	No:	2:1	1:1
		Yes:	4:1	2:1
riparian	stems > 3" & < 5"	No:	3:1	1:1
		Yes:	6:1	2:1
riparian	stems > = 5"	No:	4:1	1:1
		Yes:	8:1	2:1

[1] All stems measuring one inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.

[2] Ratios in the *Elderberry Seedling Ratio* column correspond to the number of cuttings or seedlings to be planted per elderberry stem (one inch or greater in diameter at ground level) affected by a project.

[3] Ratios in the *Associated Native Plant Ratio* column correspond to the number of associated native species to be planted per elderberry (seedling or cutting) planted.

APPENDIX E: U.S. FISH AND WILDLIFE SERVICE STANDARDIZED RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE

U.S. FISH AND WILDLIFE SERVICE STANDARDIZED RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process. All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to an6y survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied and unoccupied)	Service must be contacted

*Known den: To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

**Potential and Atypical dens: Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection. **Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service**.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities. **The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.**

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.

2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.

3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe

may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.

5. No firearms shall be allowed on the project site.

6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.

7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.

8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.

9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.

10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is

disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.

12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.

13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.

14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT "A" - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

APPENDIX F: TULARE COUNTY GENERAL PLAN POLICIES

the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region.

The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The U.S. Census Bureau estimated the 2003 Tulare County population to be 390,791.

8.1 Biological Resources

ERM-1 To preserve and protect sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County. [*New Goal]*

ERM-1.1 Protection of Rare and Endangered Species

The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or federal government, through compatible land use development. [*New Policy based on ERME IV-C; Biological Resources; Issue 12, and ERME; Pg 32*]

ERM-1.2 Development in Environmentally Sensitive Areas

The County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth. [*New Policy based on EMRE; Water; Issue 3; Recommendation 3, ERME; Pg 28]*

ERM-1.3 Encourage Cluster Development

When reviewing development proposals, the County shall encourage cluster development in areas with moderate to high potential for sensitive habitat. [*New Policy*]

ERM-1.4 Protect Riparian Areas

The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls. [*New Policy*]

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans

The County shall require mining reclamation plans and other management plans include measures to protect, maintain and restore riparian resources and habitats. [*New Policy*]

ERM-1.6 Management of Wetlands

The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats. [*New Policy*]

ERM-1.7 Planting of Native Vegetation

The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained. [*New Policy*]

ERM-1.8 Open Space Buffers

The County shall require buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities. These buffers should be sufficient to assure the continued existence of the waterways and riparian habitat in their natural state. [*New Policy based on EMRE policies*]

ERM-1.9 Coordination of Management on Adjacent Lands

The County shall work with other government land management agencies (such as the Bureau of Land Management, US Forest Service, National Park Service) to preserve and protect biological resources while maintaining the ability to utilize and enjoy the natural resources in the County. [*New Policy*]

ERM-1.10 Appropriate Access for Recreation
The County shall encourage appropriate access to resource-managed lands. [*New Policy*]

ERM-1.11 Hunting and Fishing
The County shall provide opportunities for hunting and fishing activities within the County pursuant to appropriate regulations of the California Fish & Game Code. [*New Policy*]

ERM-1.12 Management of Oak Woodland Communities
The County shall support the conservation and management of oak woodland communities and their habitats. [*New Policy*]

ERM-1.13 Pesticides
The Tulare County Agricultural Commissioner/Sealer will cooperate with State and federal agencies in evaluating the side effects of new materials and techniques in pesticide controls to limit effects on natural resources. *[ERME IV-C; Pesticides; Recommandation 1] [ERME; Pg 131, Modified*]

ERM-1.14, Mitigation and Conservation Banking Program
The County shall support the establishment and administration of a mitigation banking program, including working cooperatively with TCAG, federal, State, not-for-profit and other agencies and groups to evaluate and identify appropriate lands for protection and recovery of threatened and endangered species impacted during the land development process. [*New Policy*]

8.2 Mineral Resources - Surface Mining

ERM-2 To conserve protect and encourage the development of areas containing mineral deposits while considering values relating to water resources, air quality, agriculture, traffic, biotic, recreation, aesthetic enjoyment, and other public interest values. [*New Goal based on MRPAC June 28, 2006*]

ERM-2.1 Conserve Mineral Deposits
Emphasize the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate. [*MRPAC June 28, 2006*]

ERM-2.2 Recognize Mineral Deposits
Recognize as a part of the General Plan those areas which have identified and/or potential mineral deposits. [*MRPAC June 28, 2006*]

ERM-2.3 Future Resource Development
Provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County. [*MRPAC June 28, 2006*]

ERM-2.4 Identify New Resources
Encourage exploration, evaluation, identification, and development of previously unrecognized but potentially significant hard rock resources for production of crushed stone aggregate. [*MRPAC June 28, 2006*]

ERM-2.5 Resources Development
The County will promote the responsible development of identified and/or potential mineral deposits. [*MRPAC June 28, 2006*]

ERM-2.6 Streamline Process
Create a streamlined and timely permitting process for the mining industry, which will help encourage long-range planning and the reasonable amortization of investments. [*MRPAC June 28, 2006*]

ERM-2.8 Minimize Adverse Impacts
Minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological and aesthetic factors. [*MRPAC June 28, 2006*]

ERM-2.9 Minimize Hazards and Nuisances
Minimize the hazards and nuisances to persons and properties in the area during extraction, processing and reclamation operations. [*MRPAC June 28, 2006*]

ERM-2.10 Compatibility
Develop mineral deposits in a manner compatible with surrounding land uses. [*MRPAC June 28, 2006*]

ERM-2.11 Incompatible Development
Proposed incompatible land uses shall not be on lands containing, or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted. [*MRPAC June 28, 2006*]

ERM-2.12 Conditions of Approval
Procedures shall be established to ensure compliance with conditions of approval on all active and idle mines. [*MRPAC June 28, 2006*]

ERM-2.13 Approved Limits
Procedures shall be established to ensure that vested interest mining operations remain within their approved area and/or production limits. [*MRPAC June 28, 2006*]

ERM-2.14 SMARA Requirements
All surface mines, unless otherwise exempted, shall be subject to reclamation plans that meet SMARA requirements. Reclamation procedures shall restore the site for future beneficial use of the land. Mine reclamation costs shall be borne by the mine operator, and guaranteed by financial assurances set aside for restoration procedures. [*MRPAC June 28, 2006*]

8.3 Mineral Resources

ERM-3 To protect the current and future extraction of mineral resources that are important to the County's economy while minimizing impacts of this use on the public and the environment. [*ERME IV-B; Land; Issue 8*] [ERME; Pg 30, *Modified*]

ERM-3.1 Environmental Contamination
All mining operations shall be required to take precautions to avoid contamination from wastes or incidents related to the storage and disposal of hazardous materials, or general operating activity at the site. [*New Policy*]

ERM-3.2 Limited In-City Mining
Within UDBs, new commercial mining operations should be limited due to environmental and compatibility concerns. [*New Policy*]

ERM-3.3 Small-Scale Oil and Gas Extraction
The County shall permit by special use permit small-scale oil and gas extraction activities and facilities that can be demonstrated to not have a significant adverse effect on surrounding or adjacent land and are within an established oil and gas field outside of a UDB. [*New Policy*]

ERM-3.4 Oil and Gas Extraction
Facilities related to oil and gas extraction and processing may be allowed in identified oil and gas fields subject to a special use permit. The extraction shall demonstrate that it will be compatible with surrounding land uses and land use designations. [*New Policy*]

ERM-3.5 Reclamation of Oil and Gas Sites
The County shall require the timely reclamation of oil and gas development sites upon termination of such activities to facilitate the conversion of the land to its primary land use as designated by the General Plan. Reclamation costs shall be born by the mine operator, and guaranteed by financial assurances set aside for restoration procedures. [*New Policy, MRPAC Goals, Policies, Implementation Measures, and Development Standards, Goal F and associated policies*]

8.4 Energy Resources

ERM-4 To encourage energy conservation in new and existing developments throughout the County. [*New Goal*]

ERM-4.1 Energy Conservation and Efficiency Measures
The County shall encourage the use of solar energy, solar hot water panels, and other energy conservation and efficiency features in new